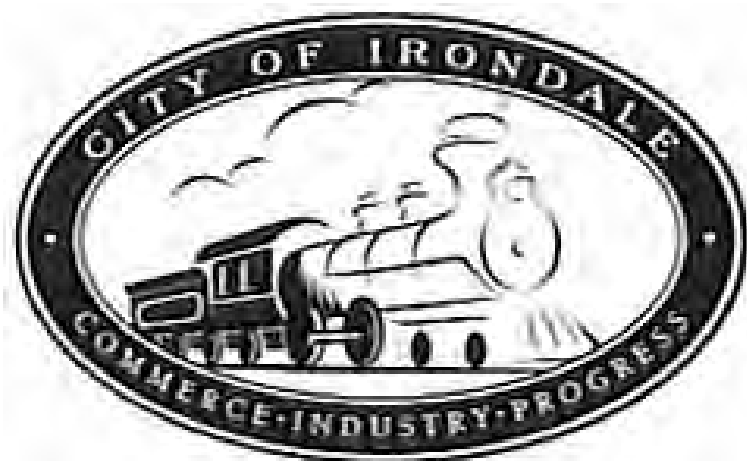


**City of Irondale's SWMPP**



**STORM WATER MANAGEMENT PROGRAM PLAN**  
**January 31, 2019**

*Prepared For*  
**City of Irondale**  
101 20<sup>th</sup> Street South  
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*Prepared by*  
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**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.



Charles Moore  
Mayor, City of Irondale

1-22-19

Date

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Appendix F - Pollution Prevention/Good Housekeeping for Municipal Operations

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## INTRODUCTION

### REGULATORY OVERVIEW

The City of Irondale (City) was issued by the Alabama Department of Environmental Management (ADEM) a Municipal Separate Storm Sewer System (MS4) Individual Phase I Permit (ALS000019) on June 7th, 2017 (**Appendix A**). This permit went into effect on July 1, 2017. Previously, the City was included as a Co-Permittee under permit number ALS000001.

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

Per the requirements of NPDES Permit Number ALS000019, BMPs, measurable goals, and responsibility designations are provided for each of the following program elements:

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

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

## MS4 JURISDICTIONAL BOUNDARY

Irondale's MS4 boundary is bound to the north by the city of Birmingham and Trussville, to the south by the city of Mountain Brook and Vestavia, and to the east and west by Birmingham and Leeds respectively. Approximately 16 square miles of residential, commercial, industrial, undeveloped lands, and streams make up the MS4 boundary. See **Figure 1: MS4 Boundary**.

There are two waterbodies, Cahaba River and Shades Creek, which are considered impaired by the U.S. Environmental Protection Agency and ADEM and flow through sections of Irondale. Cahaba River's designated use above Grant's Mill Bridge is Fish and Wildlife and below the bridge is Outstanding Alabama Waters (OAW) and Public Water Supply (PWS). Cahaba River has an approved Total Maximum Daily Loads (TMDLs) for Siltation (Habitat Alteration) and Nutrients. Shades Creek's designated use is Fish and Wildlife (F&W). Shades Creek has an approved Total Maximum Daily Loads (TMDLs) for Siltation (Habitat Alteration), Turbidity, and Pathogens (Fecal Coliform).

## LEGAL AUTHORITY AND ENFORCEMENT

Part II C of the permit requires the City to review and revise its ordinances and regulatory mechanisms as necessary to comply with the permit. Below is a summary of the current ordinances, municipal codes, and regulations related to the management of Irondale's MS4. These ordinances are found in **Appendix A**.

- **Ordinance 2018-11, Erosion and Sedimentation Control Ordinance:** Controls sedimentation leaving construction sites. The ordinance describes the fees, regulations, and the requirements surrounding a land disturbing permit issuance.
- **Ordinance 464-83, Subdivision Regulations:** Approved by the Planning and Zoning Board and carry the force of a City Ordinance. They address design requirements for residential and commercial storm water infrastructure.
- **Ordinance 00-12, Tree Ordinance:** Encourages the planting of trees and shrubs to aid in the prevention of erosion and sedimentation, reduce storm water runoff, help control drainage, and restore denuded soil subsequent to construction and grading.

- **Ordinance 2006-36, Flood Ordinance:** Promotes public health, safety and general welfare by controlling construction and construction practices in and around the floodplain as well as controlling the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters.
- **Ordinance 2017-57, Garbage, Refuse, and Trash Ordinance:** Makes it unlawful to litter upon any curb, gutter, sidewalk, avenue, highway, tunnel, park, parkway, or lot within the city limits. This ordinance also institutes a law against any person sweeping or depositing grass clippings, limbs, leaves, bushes, solid waste or any other materials on public streets, curb lines, sidewalks and gutters.
- **Ordinance 4-0794, Junked and Abandoned Motor Vehicles Ordinance:** Establishes a law against leaving abandoned and non-usable motor vehicles in the street or within public view.
- **Ordinance 2018-12, Post Construction Ordinance:** Establishes procedures to address the discharge of pollutants in post-construction storm water runoff to the MS4 from new development and re-development.
- **Ordinance 2018-13, Illicit Discharge Ordinance:** Prohibits non- storm water discharges to the MS4.

In 2011 the City of Irondale also adopted a Standard Operating Procedure (SOP) Manual detailing guidelines for addressing many activities associated with the program elements. The SOP Manual is found in **Appendix A**.

The following table reflects which City department is responsible for implementing or coordinating BMPs for each separate program element:

DEPARTMENT	RESPONSIBILITIES
<b>Storm Water Collection Systems Operations</b>	
JCDH/SWMA	Maintain map of City owned/maintained structural controls
Inspections	Semi-annual inspection of new and existing structural controls
Inspections	Develop SOP, inspection checklist, and maintenance procedures
Public Works	Stabilize and re-vegetate eroded areas as needed
Public Works	Remove floatable, litter, sediment, and debris from structural controls
<b>Public Education and Public Involvement on Storm Water Impacts</b>	
Administration	Seek and consider public input in the development and implementation of the SWMPP
Public Works	Post signs prohibiting littering and illegal dumping
Administration	Educating individuals and households on reducing storm water pollution
Administration	Community involvement in the storm water program
Administration	Evaluate the effectiveness of the public education program
Administration	Organize annual cleanup
<b>Illicit Discharge Detection and Elimination (IDDE)</b>	
JCDH/SWMA	Develop MS4 map of outfalls
Administration	Develop applicable ordinances and other regulatory mechanisms
JCDH/SWMA	Screen 20% of the stream miles during dry weather conditions
JCDH/SWMA/City Personnel	Illicit discharge source identification
JCDH/Code Enforcement	Elimination of illicit discharges
Administration	Procedures to notify ADEM of a suspected illicit discharge entering the MS4 from an adjacent MS4
Administration	Illicit discharge public reporting system
JCDH/SWMA	Educating employees on detecting an IDDE , tracing the source of and eliminating illicit discharge
Administration	Ordinance/Regulatory mechanism availability
<b>Construction Site Storm Water Runoff Control</b>	
Inspections/Engineering	Site plan reviews
Inspections/Engineering	Site inspection plan
Inspections	Inspection staff training
Inspections	Construction site inspection checklist
Administration	Enforcement Response Plan (ERP)
Administration and Inspections	Construction site operator education



DEPARTMENT	RESPONSIBILITIES
<b>Post-Construction Storm Water Management in New Development and Re-Development</b>	
Administration	Develop applicable ordinances and other regulatory mechanisms
Inspections	Inventory of post construction structural controls
<b>Spill Prevention and Response</b>	
Fire	Spill prevention/spill response plan
Fire/JCDH	Educating employees on spill prevention/spill response
<b>Pollution Prevention/Good Housekeeping for Municipal Operations</b>	
All Departments	Inventory of municipal facilities
All Departments	Good housekeeping practices SOP
All Departments	Inspection plan
JCDH	Educating employees on good housekeeping
<b>Application of Pesticides, Herbicides, and Fertilizers(PHFs)</b>	
Public Works/ Private Applicator	Application and storage of PHFs
JCDH	Educating employees on PHFs usage and storage
<b>Oils, Toxics, and Household Hazardous Waste Control</b>	
Administration	Public education on proper disposal
JCDH	Educating employees on oils, toxics, and household hazardous waste
<b>Industrial Storm Water Runoff</b>	
Administration/JCDH	Inventory of high risk facilities
JCDH	Inspection of high risk facilities
<b>Wet Weather Monitoring and Reporting</b>	
JCDH	Monitoring locations
JCDH	Impaired waterways review
JCDH	Sampling
<b>Other Requirements</b>	
Administration/JCDH	SWMPP plan review and modification
Administration/JCDH	Annual Report submittal

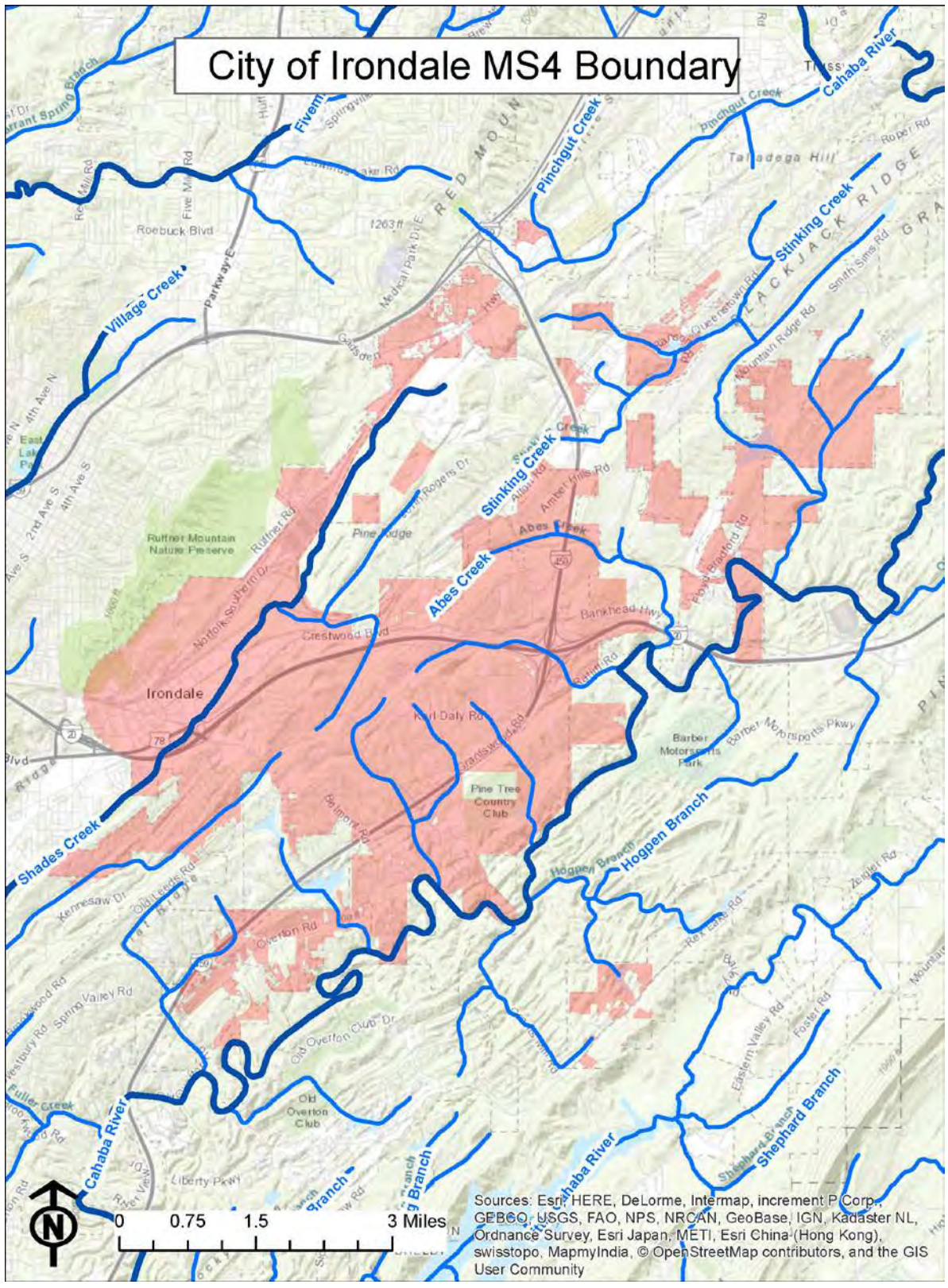


Figure 1: MS4 Boundary

## STORM WATER COLLECTION SYSTEMS OPERATIONS

### STRUCTURAL CONTROLS MAPPING

The City currently has no owned/maintained structural controls within the MS4 boundary limits.

The City will monitor the addition of any City owned/ maintained structural controls.

**Responsible Department: Inspections**

### STRUCTURAL CONTROLS INSPECTION

As stated in the permit, all existing and new structural controls owned/maintained by the Permittee shall be inspected using a standard inspection form found in **Appendix B** on a semi-annual basis, at a minimum. While the City does not own/maintain structure controls currently, any future inspections will be performed by a city inspector and/or a contractor. Any deficiencies or maintenance recommendations listed on the inspection form in regards to the structural control will be addressed by Public Works.

**Responsible Department: Inspections**

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

The standard inspection form found in **Appendix B** is used to document structural control inspections. Once any maintenance is completed, a city inspector and/or a contractor will re-inspect the Structural Control to ensure the structure can effectively function as designed.

**Responsible Department: Inspections**

### STABILIZATION AND RE-VEGETATION OF ERODED AREAS

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

**Responsible Department: Public Works**

## FLOATABLES, LITTER, SEDIMENT AND DEBRIS IN STRUCTURAL CONTROLS

All floatables, litter, sediment, and/or debris found during the structural inspection will be documented. The Public Works Department will receive a copy of the inspection documentation and will remove the noted items. Public Works will maintain documentation of the estimated amounts of floatables, litter, sediment and debris removed during maintenance activities using the Storm Water Online Activity Record (SOAR) program. The maintenance form can be found in **Appendix B**

**Responsible Department: Public Works**

## PUBLIC EDUCATION AND PUBLIC INVOLVEMENT ON STORM WATER IMPACTS

### DEVELOPMENT AND IMPLEMENTATION OF THE SWMPP

The City seeks public input on the SWMPP by posting the draft SWMPP on Irondale’s website for comments. Notification announcements will be made at council meetings. The Council-approved SWMPP for the upcoming year will then be posted on the website and be submitted yearly with the annual report on January 31<sup>st</sup>.

**Responsible Department: Administration**

### PUBLIC ACCESS TO CITY STORM WATER DOCUMENTS

The City posts copies of the current Annual Report, draft SWMPP, current SWMPP and the NPDES permit on the City’s website. The documents will be updated on the website as they are approved by the city council and/or submitted to ADEM.

**Responsible Department: Administration**

### TARGETED POLLUTANT SOURCES FOR PUBLIC EDUCATION

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

### REDUCTION OF LITTER FLOATABLES AND DEBRIS

The City currently maintains litter signage in Beacon Park, Ruffner Park, Ellard Park, the Cahaba River Walk and other places. The City will investigate options for installing additional signage, in practical locations, referencing the City’s litter control ordinance. Administration will approve the messages and Public Works will install the signs and/or labels.

**Responsible Department: Administration and Public Works**

### EDUCATING INDIVIDUALS AND HOUSEHOLDS ON REDUCING STORM WATER POLLUTION

The City posts on its website information describing Irondale’s Storm Water Program. The information includes general information about the storm water permit with links and brochures about different ways to reduce storm water pollution in relation to the different community segments. The information and links will be modified and/or updated on the



website as needed. These same brochures on storm water issues are placed at City Hall for public pickup.

**Responsible Department: Administration**

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## COMMUNITY INVOLVEMENT WITH THE STORM WATER PROGRAM

### GENERAL PUBLIC

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

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

The storm water page will be updated as needed.

**Responsible Department: Administration**

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### BUSINESSES

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

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

The storm water page will be updated as needed.

**Responsible Department: Administration**

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### HOMEOWNERS, LANDSCAPERS, AND PROPERTY MANAGERS

The City developed a storm water page on its website and placed brochures in City facilities informing homeowners, landscapers, and property managers on the following topics:

- BMPs and storage of pesticides, herbicides, and fertilizers.
- Detention/retention pond maintenance.
- General impacts of storm water from impervious surfaces into surface water.

The storm water page will be updated as needed.

**Responsible Department: Administration**

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#### ENGINEERS, CONTRACTORS, AND DEVELOPERS

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

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

The storm water page will be updated as needed.

**Responsible Department: Administration**

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

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

**Responsible Department: Administration**

#### PUBLIC AWARENESS ACTIVITIES

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

**Responsible Department: Administration**

## ILLCIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

### MS4 MAP

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

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

**Responsible Party: JCDH**

### ORDINANCE/REGULATORY MECHANISM

Ordinance 2018-13, passed in 2018, addresses illicit discharges as required by the City's Permit.

**Responsible Department: Administration**

### DRY WEATHER SCREENING PROGRAM

Dry weather screening of 20% of the stream miles will be performed annually with 100 percent of the major outfalls screened at least once per the five year permit period. This work will be completed by JCDH. Currently there are no priority outfalls identified within the MS4 boundary, but if illicit discharges are identified during the dry weather inspections, those outfalls will be screened on an annual basis. JCDH shall use the EPA's guidance manual, *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October, 2004, for the main source of investigative techniques and guidance for the dry weather screening process. Outfalls will be field inspected after a minimum of 72 hours of dry weather. Data sheets found in **Appendix C** will be filled out for each outfall inspected. Protocols for dry weather are also found in the Standard Operating Procedure Manual. In addition to the required dry weather screening program, Public Works staff will be educated annually to recognize and report potential illicit discharges while conducting their day to day operations. Also, all citizen complaints regarding potential illicit discharges will be investigated.



**Responsible Party: JCDH**

#### SOURCE IDENTIFICATION

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

**Responsible Parties: Inspections Department and/or JCDH**

#### ILLICIT DISCHARGE ELIMINATION

Once the source and responsible party of an illicit discharge has been identified, either the City will take action through its pertinent ordinances or JCDH will through its regulations.

**Responsible Parties: Inspections Department or JCDH**

#### ADEM NOTIFICATION BY THE CITY

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

**Responsible Department: Inspections Department**

## ILLCIT DISCHARGE REPORTING BY THE PUBLIC

The City receives calls for illicit discharges at the City Hall phone number 205-956-9200 frequently. There is also a phone number, 205-930-1999, listed on the City's website to report illicit discharges.

**Responsible Department: Administration**

## PERSONNEL TRAINING

Non-First Responder City Personnel will be trained by JCDH on IDDE identification and response annually.

**Responsible Party: JCDH**

## ORDINANCE/REGULATORY MECHANISM AVAILABILITY

All ordinances and regulatory mechanisms can be found on the City's website, <http://cityofirondaleal.gov/> , or through the link to Municode on the City's website.

**Responsible Department: Administration**

## CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

### EROSION AND SEDIMENTATION CONTROL COMPLAINTS

The City frequently receives calls about construction and sedimentation runoff at the city hall phone number (205-956-9200). These calls are directed to the Department of Building Inspections and Permitting (205-951-1417). The City website lists the Department of Building Inspections and Permitting as the contact number for construction complaints.

**Responsible Department: Building Inspections and Permitting**

### SITE PLAN REVIEWS

According to Ordinance 2018-11, a BMP plan must be submitted to the City along with the permit application before the commencement of any land disturbance. The City must either approve or disapprove the BMP plan within 14 days. Reasons for disapproval must be submitted to the applicant in writing. All revisions have an additional 14-day response time. Land disturbing activity may not be commenced prior to the issuance of the permit by the City.

**Responsible Department: Building Inspections and Permitting**

### SITE INSPECTION PLAN

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

**Responsible Department: Building Inspections and Permitting**

### TRAINING OF MS4 SITE INSPECTION STAFF

City staff responsible for construction site inspections receive QCI training annually.

**Responsible Department: Building Inspections and Permitting**

## CONSTRUCTION SITE INSPECTION CHECKLIST

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

**Responsible Department: Building Inspections and Permitting**

## ENFORCEMENT RESPONSE PLAN (ERP)

An Enforcement Response Plan is included in Ordinance 2018-11

**Responsible Department: Building Inspections and Permitting**

## CONSTRUCTION SITE OPERATOR TRAINING

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

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

The storm water page will be updated as needed.

**Responsible Department: Administration and Building Inspections and Permitting**

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

### ORDINANCE/REGULATORY MECHANISM

City Ordinance 2018-12 meets the requirements for post-construction storm water management.

The Post-Construction Ordinance addresses the following:

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

**Responsible Department: Administration and Building Inspections and Permitting**

### INVENTORY OF POST CONSTRUCTION STRUCTURAL CONTROLS

The City currently has no publically-owned structural controls. The City will develop a list of privately-owned structural controls for those built after the codification of the new requirements. The City will update annually the list of publicly-owned post construction structural controls and the privately-owned structurally controls under the new requirements.

**Responsible Department: Building Inspections and Permitting**

## SPILL PREVENTION AND RESPONSE

### CITY RESPONSE PROTOCOL

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

### SPILL PREVENTION/SPILL RESPONSE PLAN

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

**Responsible Department: Fire**

### PERSONNEL SPILL PREVENTION/RESPONSE TRAINING

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

**Responsible Party: JCDH**

## POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

### MUNICIPAL FACILITIES INVENTORY

See **Figure 2: Municipal Properties** for a map of municipal properties as well as the locations for vehicle and equipment maintenance facilities. The map shows which department maintains which properties. Generally, Parks and Recreation use pesticides, herbicides and fertilizers while Public Works only mows. The map will be reviewed annually and updated if needed. JCDH will compile the data provided by each Department.

**Responsible Department: All Departments**

### GOOD HOUSEKEEPING PRACTICES SOP

The SOP detailing good housekeeping practices is found in the 2011 SWMA SOP Manual.

**Responsible Department: All Departments**

### INSPECTION PLAN

Annual inspections will be conducted for municipal facilities, to include municipal maintenance shops and equipment yards, for good housekeeping practices, including BMPs. See **Appendix F** for the inspection checklist.

**Responsible Department: All Departments**

### GOOD HOUSEKEEPING TRAINING PROGRAM

City staff will be educated annually on good housekeeping practices. The 2011 SWMA SOP Manual contains procedures related to Good Housekeeping.

**Responsible Party: JCDH**

### SHORT TERM AND LONG TERM TRASH REMOVAL STRATEGY

The City has a SOP for special events that promotes the reduction of trash and debris into the City's MS4 as well as Waters of the State (**Appendix F**).

**Responsible Party: JCDH**



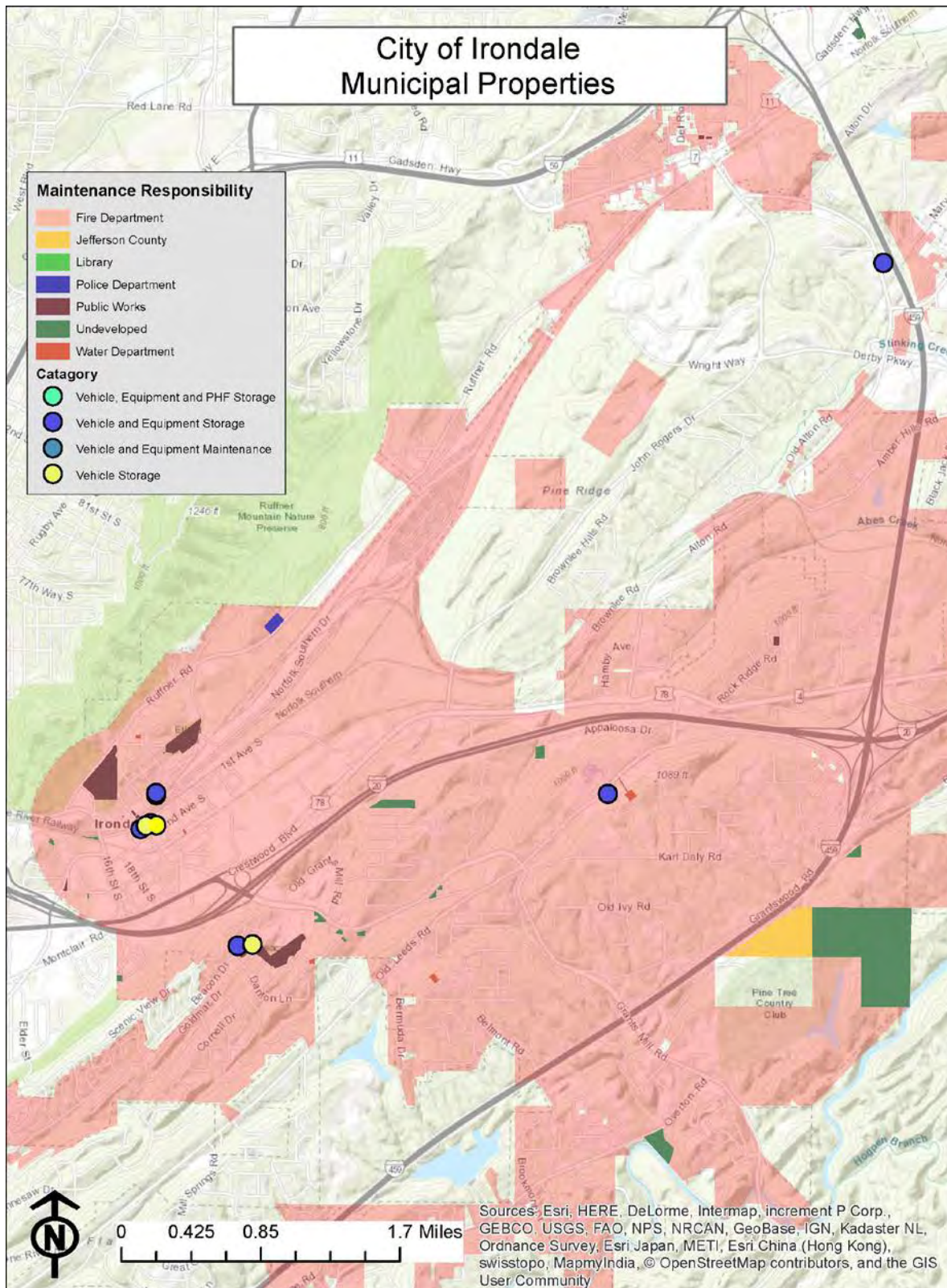


Figure 2: Municipal Properties



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

### APPLICATION AND STORAGE

The Public Works Department keeps annual records of pesticides, herbicides, and fertilizers (PHFs) used at municipal facilities. Each chemical used is applied per the labeling instructions. Material safety data sheets (MSDS) on each product are found in the chemical storage areas. City staff responsible for application of PHFs receive annual training in safe use, storage, and disposal of PHFs. A map of the scheduled spraying sites for the year is found in **Figure 3: PHF Distribution**. The scheduled spraying is subject to change. All contractors contracted to apply pesticides or herbicides to City property shall provide proper certification and licensing before performing work. Also, contractors contracted to apply fertilizer must provide qualification in utilizing proper nutrient management practices.

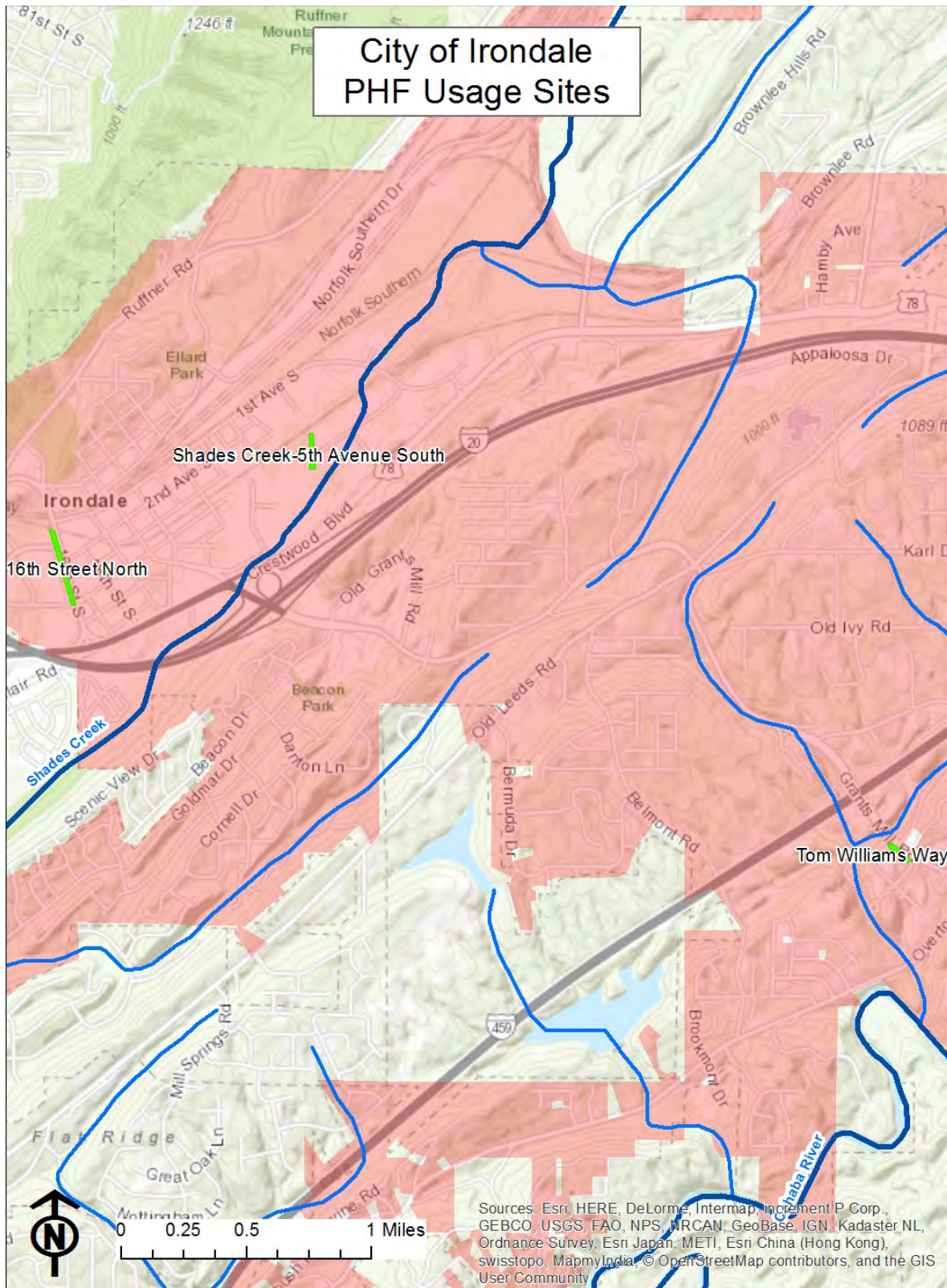
City facilities that store PHFs will be inspected annually to determine proper storage, product labeling, and MSDS accessibility (**Figure 2: Municipal Properties**). The SOP manual contains procedures related to usage and storage of PHFs.

**Responsible Department: Public Works**

### PHF TRAINING PROGRAM

City staff will be educated annually on proper PHF practices.

**Responsible Party: JCDH**



**Figure 3: PHF Distribution**

## OILS, TOXICS, AND HOUSEHOLD HAZARDOUS WASTE

### PUBLIC EDUCATION ON PROPER DISPOSAL

The city has contact information on the City's website on where to report spills, illicit discharges and improper disposals.

The City also provides a link on the City's website that allows citizens to search for oil recycling sites in or near the City. Brochures on oils, toxics, and household hazardous waste are on the City storm water website as well as placed in City facilities for public pick-up.

**Responsible Department: Administration**

### ANNUAL EMPLOYEE TRAINING

Annual training on spill prevention is provided to City personnel by JCDH.

**Responsible Party: JCDH**

## INDUSTRIAL STORM WATER RUNOFF

### INVENTORY OF HIGH RISK FACILITIES

The City maintains a list of industrial and high risk facilities within the city limits, see **Appendix G**. This list is updated annually.

The list of industrial facilities will be reviewed annually for completeness and accuracy and will be updated when necessary. A map of the industrial and high risk facilities can be found in **Figure 3: Industrial and High Risk Facilities**.

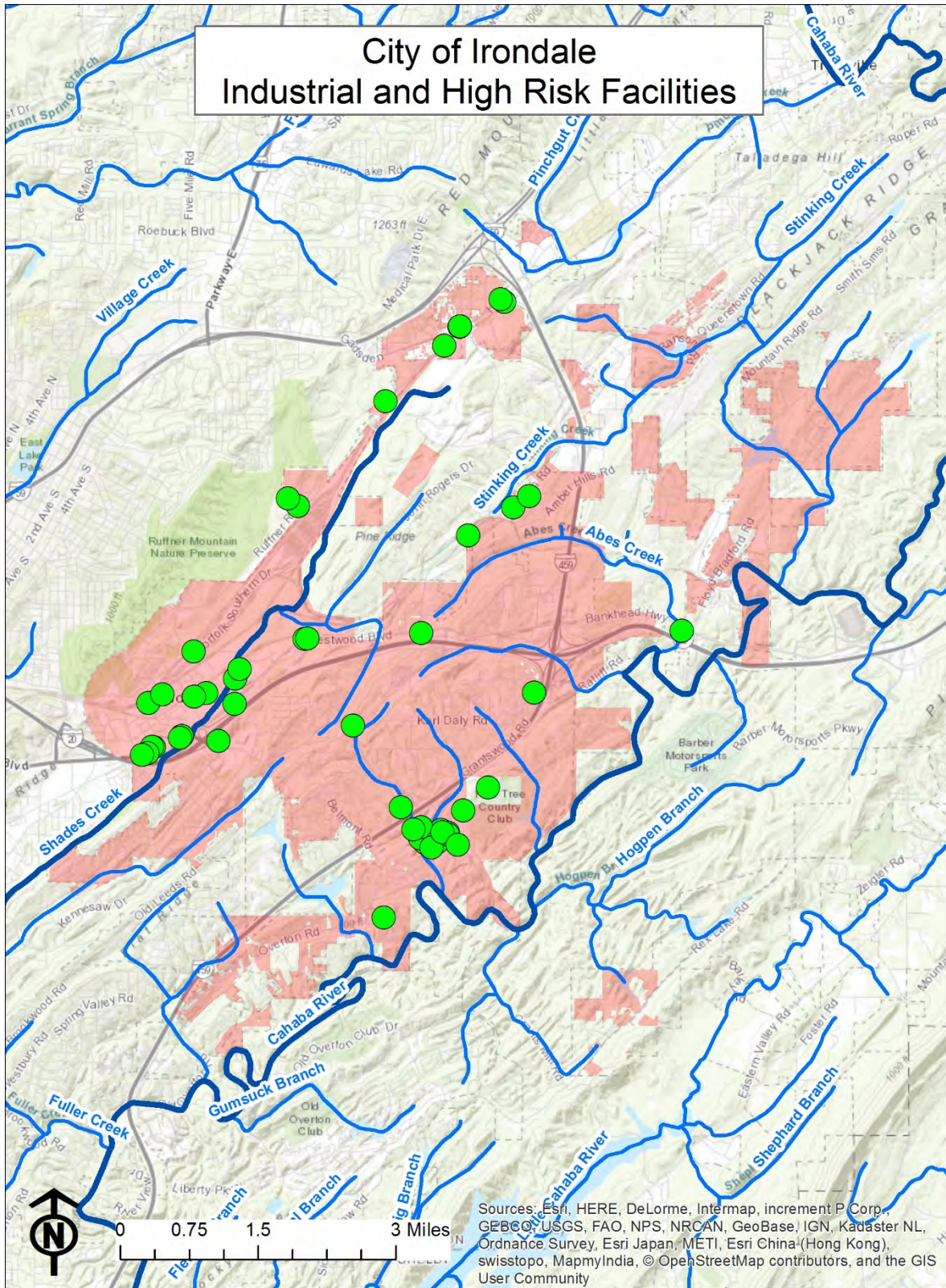
**Responsible Party: JCDH and Administration**

### INSPECTION OF HIGH RISK FACILITIES

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

**Responsible Party: JCDH**





**Figure 4: Industrial and High Risk Facilities**

## WET-WEATHER MONITORING AND REPORTING

### MONITORING LOCATIONS

JCDH will take wet-weather grab samples at sites on Cahaba River and Shades Creek annually on behalf of the City. See **Figure 4: Sampling Sites** for a map of the sampling sites

The site locations are as follows:

Water Body	Latitude, Longitude	Description
Cahaba River	33.511484, -86.652636	Grab Sample
Shades Creek	33.520615, -86.716795	Grab Sample and Water Quality Sonde Site

An hourly water quality sonde will be placed on Shades Creek. The sonde will be managed by the United States Geological Survey (USGS). The site's title is USGS 02423571 Shades Creek at Elder St. near Springdale AL.

**Responsible Party: JCDH**

### IMPAIRED WATERWAYS

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

**Responsible Party: JCDH**

### MONITORING PARAMETERS AND FREQUENCY

Grab samples will be analyzed for the following parameters:

- a. E.Coli
- b. Total Nitrogen (TN) (mg/l)
- c. Total Phosphorus (mg/l)
- d. Total Suspended Solids (TSS) (mg/l)
- e. Temperature
- f. pH/ORP
- g. Turbidity (NTU)
- h. Conductivity
- i. Dissolved Oxygen (mg/l)

- j. Ammonia Nitrogen (NH<sub>3</sub>-N) (mg/l)
- k. Biochemical Oxygen Demand (BOD) (mg/l)
- l. Chemical Oxygen Demand (COD) (mg/l)
- m. Hardness as CaCO<sub>3</sub> (mg/l)
- n. Nitrate plus Nitrite Nitrogen (NO<sub>3</sub>+NO<sub>2</sub>-N) (mg/l)
- o. Oil and Grease (mg/l)
- p. Total Dissolved Solids (TDS) (mg/l)
- q. Total Kjeldahl Nitrogen (TKN) (mg/l)

The water quality sonde will monitor the following parameters at least hourly:

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

**Responsible Party: JCDH**

#### SAMPLE TYPE, COLLECTION AND ANALYSIS

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

**Responsible Party: JCDH**



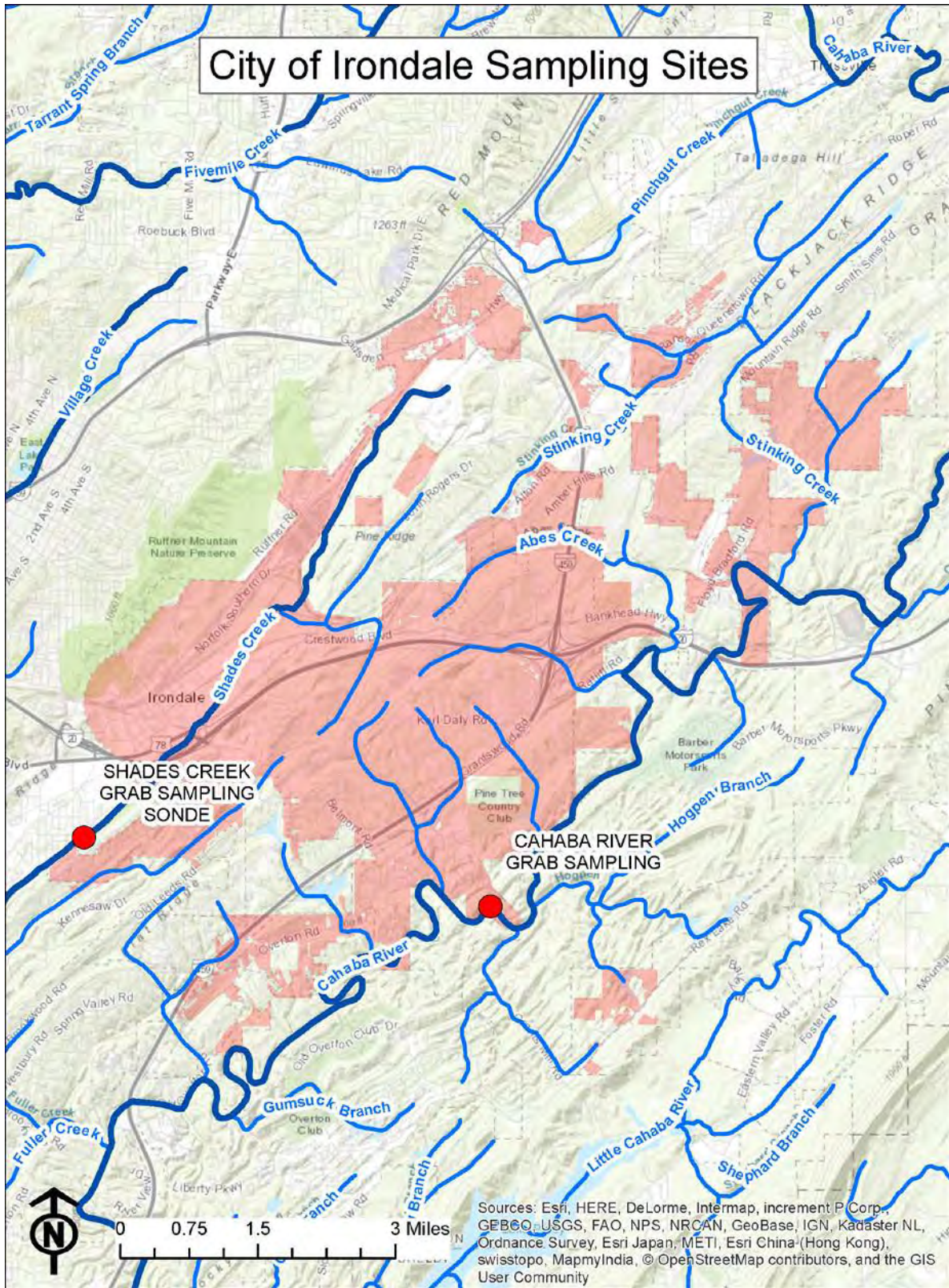


Figure 5: Sampling Sites

## OTHER REQUIREMENTS

### SWMPP PLAN REVIEW AND MODIFICATION

This plan will be reviewed annually and updated as necessary.

**Responsible Department: All Departments**

### ANNUAL REPORT

The Annual report will be compiled by JCDH for the city of Irondale.

**Responsible Party: JCDH**



## **APPENDIX A**

### Irondale Storm Water Program Documents

Alabama Department of Environmental Management  
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463  
Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

**JUN - 7 2017**

Certified Mail # 91 7108 2133 3936 7155 3634

Honorable Charles Moore  
Mayor, City of Irondale  
PO BOX 100188  
Irondale, Alabama 35210

RE: Municipal Separate Storm Sewer System (MS4) Individual Phase I Permit  
NPDES Number ALS000019  
City of Irondale MS4  
Jefferson County (073)

Dear Mayor Moore:

The Department has made a final determination to issue NPDES Permit No. ALS000019 to the City of Irondale for discharges from its MS4. The NPDES Permit Number ALS000019 will be effective July 1, 2017 and expire on June 30, 2022.


The Department notified the public of its tentative determination to issue NPDES Permit No. ALS000019 on January 27, 2017. Interested persons were provided the opportunity to submit comments on the Department's tentative decision through February 27, 2017. In accordance with ADEM Admin Code r. 335-6-6-.21(7), a response to all comments received during the public comment period are provided with the enclosed permit.

The City of Irondale is responsible for compliance with all provisions of the permit including, but not limited to, the performance of any monitoring, the submittal of any reports, and the preparation and implementation of any plans required by the permit.

Please note that On October 22, 2015, EPA finalized the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule (Federal Register Vol. 80 No. 24). As required by this rule, the Department has included, in this permit, a requirement that on and after December 21, 2020, annual reports shall be submitted to the Department electronically in a prescribed manner acceptable to the Department.

If you have questions concerning this permit, please contact Marla Smith either by email at [mssmith@adem.alabama.gov](mailto:mssmith@adem.alabama.gov) or by phone at 334-270-5616.

Sincerely,

  
Jeffery W. Kitchens, Chief  
Stormwater Management Branch  
Water Division

JWK/mss

File: FPER/6374

Enclosures: Permit and Response to Comments

cc: Ms. Kacy Sable /Environmental Protection Agency



# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: CITY OF IRONDALE

AREA OF COVERAGE: CORPORATE BOUNDARIES OF THE CITY OF IRONDALE

PERMIT NUMBER: ALS000019

RECEIVING WATERS: WATERBODIES WITHIN THE CORPORATE BOUNDARIES OF CITY OF IRONDALE

*In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.*

ISSUANCE DATE: JUNE 7, 2017

EFFECTIVE DATE: JULY 1, 2017

EXPIRATION DATE: JUNE 30, 2022

*GLENN A. DEAN*

Alabama Department of Environmental Management

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## **PART I Applicability**

### ***A. Permit Area***

This permit applies to the corporate boundaries of the City of Irondale that are regulated by the Permittee and discharge to the Permittee's Municipal Separate Storm Sewer System (MS4).

### ***B. Authorized Discharges***

1. This permit authorizes all existing or new storm water point source discharges to waters of the State of Alabama from those portions of the (MS4s) owned or operated by the Permittee. Discharge of pollutants shall be reduced to the Maximum Extent Practicable (MEP), shall not cause, nor contribute to, violations of Alabama Water Quality Standards, and shall be in compliance with Total Maximum Daily Loads (TMDLs) where applicable.
2. This permit authorizes the following non-storm water discharges provided that they do not cause or contribute to a violation of water quality standards and provided that they have been determined not to be substantial contributor pollutants by the Permittee or the Department:
  - a. Water line flushing
  - b. Landscape irrigation (not consisting of treated, or untreated wastewater unless authorized by the Department)
  - c. Diverted stream flows
  - d. Uncontaminated ground water infiltration
  - e. Uncontaminated pumped groundwater
  - f. Discharges from potable water sources
  - g. Foundation and footing drains
  - h. Air conditioning drains
  - i. Irrigation water (not consisting of treated, or untreated, wastewater unless authorized by the Department)
  - j. Rising ground water
  - k. Springs
  - l. Water from crawl space pumps
  - m. Lawn watering runoff
  - n. Individual residential car washing, to include charitable carwashes
  - o. Residual street wash water
  - p. Discharge or flows from firefighting activities (including fire hydrant flushing)
  - q. Flows from riparian habitats and wetlands
  - r. Dechlorinated swimming pool discharges

### ***C. Prohibited Discharges***

The following discharges are not authorized by this permit:

1. Discharges that are mixed with sources of non-storm water, unless such non-storm water discharges are in compliance with a separate NPDES permit or where those dischargers have been determined not to represent significant sources of pollution, as identified by, and in compliance with, Part I.B.2;
2. Discharges of materials resulting from a spill, except emergency discharges required to prevent imminent threat to human health or to prevent severe property damage, provided reasonable and prudent measures have been taken to minimize the impact of the discharges; and

3. The discharge of sanitary wastewater through cross connections or other illicit discharges through the MS4 is prohibited.

## **PART II Storm Water Pollution Prevention and Management Programs**

### ***A. Storm Water Management Program (SWMP)***

1. The Permittee is required to develop, revise, implement, maintain and enforce a storm water management program (SWMP) which shall include controls necessary to reduce the discharge of pollutants from its MS4 consistent with Section 402(p)(3)(B) of the Clean Water Act and 40 CFR Part 122.26. These requirements shall be met by the development and implementation of a storm water management program plan (SWMPP) which addresses the best management practices (BMPs), control techniques and systems, design and engineering methods, public participation and education, monitoring, and other appropriate provisions designed to reduce the discharge of pollutants from the MS4 to the MEP.
2. The Permittee shall provide and maintain adequate finance, staff, equipment, and support capabilities necessary to implement the SWMPP and comply with the requirements of this permit.
3. The SWMPP must address the minimum program elements referenced in Part II.B. to include the following:
  - a. A map of the Permittee's MS4 corporate boundaries;
  - b. The BMPs that will be implemented for each control measure. Low impact development (LID)/green infrastructure (GI) shall be considered 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/polwaste/green/index.cfm>;
  - c. The measureable goals for each of the program elements outlined in Part II.B.;
  - d. The proposed schedule – including interim milestones, as appropriate, inspections, and the frequency of actions needed to fully implement each program element; and
  - e. The person and/or persons responsible for implementing or coordinating the BMPs for each separate program element.
4. Once the SWMPP is acknowledged by ADEM, activities and associated schedules outlined by the SWMPP or updates to the SWMPP are conditions of this permit.
5. Unless otherwise specified in this permit, the Permittee shall be in compliance with the conditions of this permit by the effective date.

### ***B. Storm Water Program Elements and Requirements***

1. **Storm Water Collection System Operations**
  - a. **Structural Controls**
    - i. For Permittee owned/maintained structural controls, the structural controls shall be operated in a manner to reduce the discharge of pollutants, to the MEP;
    - ii. For Permittee owned/maintained structural controls, the Permittee shall include in the SWMPP and implement the following:
      1. Maintain a map of the structural controls;

2. Inspect existing and newly constructed structural controls on a semi- annual basis, at a minimum;
  3. Develop a standard operating procedure (SOP) or inspection checklist for structural control inspection and maintenance procedures;
  4. Stabilization and re-vegetation of eroded areas as needed; and
  5. Floatables, litter, sediment and debris, in structural controls, shall be removed as needed.
- iii. The Permittee shall maintain an inventory of structural controls, and maintain a tracking system for inspections and maintenance of the control structures; and
- iv. The Permittee shall report each year in the annual report the following structural control information:
1. The number of inspections performed on structural controls, to include follow-up inspections. The inspection documentation (i.e. checklist) shall be made available upon request;
  2. A summarization of the maintenance activities performed on structural controls;
  3. The estimated amount of floatable, litter, sediment and debris that was removed, if applicable;
  4. Copies of any contractual agreements for maintenance activities if not performed by the Permittee, if requested by the Department. The contractual agreement should specify maintenance activities performed and schedule; and
  5. Updated structural controls map of Permittee-owned structural controls added during the preceding year with geographic coordinates.

**2. Public Education and Public Involvement on Storm Water Impacts**

- a. The Permittee must further develop and implement a public education and outreach program to inform the community about the impacts from storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff to the MEP. The Permittee shall continuously implement this program in the areas served by the MS4.
- b. The Permittee shall include within the SWMPP the methods for how it will:
1. Seek and consider public input in the development, revision and implementation of the SWMPP;
  2. Identify targeted pollutant sources the Permittee’s public education program is intended to address;
  3. Plans to specifically address the reduction of litter, floatables and debris from entering the MS4, that may include, but is not limited to:
    - a. Labeling storm drain inlets and catch basins with “no dumping” message; and
    - b. Posting signs referencing local codes that prohibit littering and illegal dumping at designated public access points to open channels, creeks, and other relevant waterbodies
  4. Inform and involve individuals and households about the steps they can take to reduce storm water pollution; and
  5. Inform individuals and groups on how to become involved in the storm water program (with activities such as local stream and lake restoration activities). The target audiences and subject areas for the education program that are likely to have



significant storm water impacts should include, but is not limited to, the following:

- i. General Public
    - a. General impacts litter has on water bodies, how trash is delivered to streams via the MS4 and ways to reduce the litter;
    - b. General impacts of storm water flows into surface water from impervious surface; and
    - c. Source control BMPs in areas of pet waste, vehicle maintenance, landscaping and rain water reuse.
    - d. Impacts of illicit discharges and how to report them.
  - ii. General Public and Businesses to include Home-Based and Mobile Businesses
    - a. BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials;
    - b. Impacts of illicit discharges and how to report them.
  - iii. Homeowners, Landscapers, Property Managers and City Personnel
    - a. Landscape techniques that protect water quality;
    - b. BMPs for use and storage of pesticides, herbicides and fertilizers;
    - c. BMPs for carpet cleaning and auto repair and maintenance; and
    - d. Storm water pond maintenance.
  - iv. Engineers, City Personnel, Land Use Planners, Contractors and Developers
    - a. Impacts of increased storm water flows into receiving water bodies;
    - b. Technical standards for construction site sediment and erosion control;
    - c. Storm water treatment and flow control BMPs; and
    - d. Run-off reduction techniques and low impact development (LID)/green infrastructure (GI) practices that may include, but not limited to, site design, pervious pavement, alternative parking lot design, retention of forests and mature trees to assist in storm water treatment and flow control BMPS.
6. Evaluate the effectiveness of the public education and public involvement program; and
  7. Organize and participate in activities that target the removal of litter, floatables, and debris from area waterways. The minimum number and the waterways these activities will target will be addressed in the SWMPP.
- c. The Permittee shall report each year in the annual report the following information:
    - 1) A description of the activities used to involve groups and/or individuals in the development and implementation of the SWMPP;
    - 2) A description of the individuals and groups targeted and how many groups and/or individuals participated. If exact participation is not readily quantifiable, an estimation will be sufficient;
    - 3) A description of the communication mechanisms or advertisements used to inform the public and the number of applications that were distributed (i.e. number of printed brochures, copies of newspapers, workshops, public service announcements, etc);
    - 4) Results of the evaluation as required in Part II.B.2.b.6.; and
    - 5) A list of the activities required in Part II.B.2.b.7 and the estimated amount of litter, floatables and debris removed during each activity.
  - d. The current SWMPP and latest annual report should be posted on the Permittee's website.

### 3. Illicit Discharge Detection and Elimination (IDDE)

- a. The Permittee shall implement an ongoing program to detect and eliminate illicit discharges into the MS4, to the maximum extent practicable. The program shall include, at a minimum, the following:
  - 1) The development and annual update of an MS4 map. An initial map shall be provided in the SWMPP with updates provided each year in the annual report. The map shall include, at a minimum:
    - a. The latitude/longitude of all known major outfalls;
    - b. The names of all waters of the State within the MS4 area that receive discharges from these major outfalls; and,
  - 2) To the extent allowable under State law, an ordinance or other regulatory mechanism that prohibits non-storm water discharges to the MS4. The ordinance or other regulatory mechanism shall:
    - a. Include escalating enforcement procedures and actions;
    - b. Require the removal of illicit discharges and the immediate cessation of improper disposal practices upon identification of responsible parties. Where the removal of illicit discharge within ten (10) working days is not possible, the ordinance shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4; and
    - c. Provide for the review of the IDDE ordinance and update as necessary.
  - 3) A dry weather screening program designed to detect and address non-storm water discharges to the MS4. This program must address, at a minimum, dry weather screening of twenty (20) percent of the major outfalls at least once per year with all (100 percent) major outfalls screened at least once per five years. Also, priority areas, as described by the Permittee in the SWMPP, will be dry weather screened on a more frequent schedule as outlined in the SWMPP. If any flow, from an unidentified source, is observed during the dry weather screening of an outfall, then the Permittee shall follow the sampling protocol as outlined in the SWMPP and developed in accordance with EPA's guidance manual, *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October, 2004.
  - 4) Procedures for tracing the source of a suspect illicit discharge as outlined in the SWMPP. At a minimum, these procedures will be followed to investigate portions of the MS4 that, based on the results of the field screening or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.
  - 5) Procedures for eliminating an illicit discharge as outlined in the SWMPP;
  - 6) Procedures to notify ADEM of a suspect illicit discharge entering the Permittee's MS4 from an adjacent MS4 as outlined in the SWMPP;
  - 7) A mechanism for the public to report illicit discharges discovered within the Permittee's MS4 and procedures for appropriate investigation of such reports;
  - 8) A training program for appropriate personnel on identification, reporting, and corrective action of illicit discharges; and

- 9) The Permittee shall post on its website the ordinance or other regulatory mechanism as required by Part II.B.3.a.2 of this Permit.
- b. The Permittee shall report each year in the annual report the following information:
- 1) List of outfalls observed during the dry weather screening of the current year and a list of the outfalls to be dry weather screened during the upcoming year;
  - 2) Updated MS4 map(s), if necessary;
  - 3) Copies of the IDDE ordinance or other regulatory mechanism or provide a hyperlink for the ordinance or regulatory mechanism location on the Permittee's website; and,
  - 4) The number of illicit discharges investigated, any associated sampling results, and the summary of corrective actions taken to include dates and timeframe of response.

**4. Construction Site Storm Water Runoff Control**

- a. The Permittee shall further develop/revise, implement and enforce an ongoing program to reduce, to the maximum extent practicable, the pollutants in any storm water runoff to the MS4 from qualifying construction sites. The program shall include the following, at a minimum:
- 1) Procedures to require all applicable construction sites to obtain coverage under ADEM NPDES General Permit ALR10000 or other applicable NPDES permits;
  - 2) To the extent allowed under State law, an ordinance or other regulatory mechanism to require effective erosion and sediment controls on qualifying construction sites, as well as sanctions to ensure compliance;
  - 3) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
  - 4) Procedures for site plan review to ensure the selection of effective erosion and sediment controls are consistent with the Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas published by the Alabama Soil and Water Conservation Committee (hereinafter the "Alabama Handbook") and are appropriate for site conditions. Site plan review may be prioritized based on criteria outlined in the Permittee's SWMPP and may include, but is not limited to, size and location within priority watersheds. The plan review process will also consider potential water quality impacts;
  - 5) A mechanism for the public to report complaints regarding pollution discharges from construction sites;
  - 6) Inspection of sites to verify use and proper maintenance of appropriate BMPs. Inspections of construction sites shall be performed in accordance with the frequency specified in the table below:

Site	Inspection Frequency
Priority Construction Sites (Defined in Part V.Y.)	At a minimum, inspections must occur monthly
Other sites determined by the Permittee or Permitting Authority to be a significant threat to water quality*	
All construction sites not meeting the criteria specified above.	At a minimum, inspections must occur every two months

<p>*In evaluating the threat to water quality, the following factors must be considered: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-storm water discharges; past record of non-compliance by the operators of the construction site; and other factors deemed relevant to the MS4.</p>	

- 7) Training for the Permittee's construction site inspection staff in the identification of appropriate construction best management practices (Example: QCI training in accordance with ADEM Admin Code. r. 335-6-12 or the Alabama Construction Site General Permit);
  - 8) Development of a construction site inspection checklist;
  - 9) Implementation of an enforcement response plan (ERP), which sets out the Permittee's potential responses to violations through progressively stricter actions as needed to achieve compliance. The ERP must include a system for tracking formal actions and ADEM referrals. Types of enforcement actions may include, but not limited to the following:
    - a. Verbal Warnings—Verbal warnings are primarily consultative in nature and must specify the nature of the violation and required corrective action;
    - b. Written Notices—Written Notices must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action; and
    - c. Escalated Enforcement Measures—Citations, stop work orders, withholding plan approvals/authorizations, monetary penalties, or additional measures to address persistent non-compliance, repeat or escalating violations or incidents of major environmental harm.
  - 10) A program to make available a list of education and training materials and resources to construction site operators in the appropriate application and maintenance of erosion and sediment controls; and
  - 11) The Permittee shall post on its website the ordinance or other regulatory mechanism required by Part II.B.4.a.2.
- b. The Permittee shall include within the SWMPP the following information:
- 1) Procedures for site plan reviews required by Part II.B.4.a.4;
  - 2) A site inspection plan meeting the requirements of Part II.B.4.a.6;
  - 3) Plans for the training of MS4 site inspection staff as required by Part II.B.4.a.7;
  - 4) A copy of the construction site inspection checklist as required by Part II.B.4.a.8;
  - 5) The ERP as required by Part II.B.4.a.9;
  - 6) Procedures and schedule for making available a list of education and training materials and resources to construction site operators in the appropriate application and maintenance of erosion and sediment controls required by Part II.B.4.a.10.
- c. The Permittee shall report each year in the annual report the following information:
- 1) A copy or a hyperlink to the ordinance or regulatory mechanism location on the Permittee's website;
  - 2) List of all active qualifying construction sites within the MS4 to include the inspections as required by Part II.B.4.a.6; and
  - 3) A summary of the following:

- a. Number of construction site inspections;
  - b. Number of formal enforcement actions and description of violations;
  - c. Number of construction site runoff complaints received.
  - d. Number of new staff trained and follow-up training provided to existing staff.
- d. The Permittee shall maintain the following information and make it available upon request:
- 1) Documentation of all inspections conducted of construction sites. The inspection documentation shall include, at a minimum, the following:
    - a. Facility type;
    - b. Inspection date;
    - c. Name and signature of inspector;
    - d. Location of construction project;
    - e. Owner/operator information (name, address, phone number, fax, and email);
    - f. Description of the storm water BMP condition that may include, but not limited to, the quality of: vegetation and soils, inlet and outlet channels and structures, embankments, slopes, and safety benches; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures; and
    - g. Photographic documentation of any issues and/or concerns.
  - 2) Documentation of enforcement actions taken at construction sites to include, at a minimum, the following:
    - a. Name of owner/operator;
    - b. Location of construction project;
    - c. Description of violation;
    - d. Required schedule for returning to compliance;
    - e. Description of enforcement response used, including escalated responses if repeat violations occur;
    - f. Accompanying documentation of enforcement responses (e.g. notices of non-compliance, notices of violations, etc.); and
    - g. Any referrals to different Departments or Agencies.
  - 3) Records of public complaints including:
    - a. Date, time and description of the complaint;
    - b. Location of subject construction sites; and
    - c. Identification of any actions taken (e.g. inspections, enforcement, corrections). Identifying information must be sufficient to cross-reference inspection and enforcement records.
  - 4) Educational and Training Documentation for Construction Site Operators
    - a. List of education and training materials and resources

**5. Post-Construction Stormwater Management in Qualifying New Development and Re-Development**

The Permittee must develop/revise and implement a program, within 365 days from the effective date of this permit, to address the discharge of pollutants in post-construction storm water runoff to the MS4 from new development and re-development. Post-Construction Stormwater Management refers to the activities that take place after construction occurs, and includes structural and non-structural controls including low-impact development and green infrastructure practices to obtain permanent stormwater management over the life of the property's use. These post construction controls should be considered during the initial site development planning phase.

- a. The Permittee shall develop/revise and implement project review and enforcement procedures for qualifying new development and redevelopment projects, to the maximum extent practicable. Specifically, the Permittee shall:
  - 1) Require landowners and developers to, the MEP, implement systems of appropriate structural and/or non-structural BMPs designed to reduce the discharge of pollutants, which may include, but is not limited to, the following:
    - a. Minimize the amount of impervious surfaces;
    - b. Preserve and protect ecologically sensitive areas that provide water quality benefits;
    - c. Provide vegetated buffers along waterways, and reduce discharges to surface waters from impervious surfaces such as parking lots;
    - d. Implement policies to protect trees, native soils and other vegetation; and
    - e. Minimize topsoil stripping and compacted soils where feasible.
  - 2) Require landowners and developers to develop and maintain best management practices to ensure, to the maximum extent practicable, that post-construction runoff mimics pre-construction hydrology of the site. A 1.1 inch rainfall over a 24-hour period preceded by a 72-hour antecedent dry period shall be the basis for the design and implementation of post construction BMPs;
  - 3) Encourage landowners and developers to incorporate the use of low impact development (LID)/green infrastructure where feasible. Information on low impact development (LID)/green infrastructure is available on the following website:<http://www.adem.alabama.gov/programs/water/waterforms/LIDHandbook.pdf> and <http://epa.gov/nps/lid>;
  - 4) To the extent allowed under State law, adopt or amend an ordinance or other regulatory mechanism to ensure the applicability and enforceability of post-construction BMPs at all new qualifying development and redevelopment projects;
  - 5) Require the submittal of a post-construction BMP plan, for review, as outlined in the SWMPP. The post-construction BMP plan review process may be integrated with the construction plan review process under Section II.B.4.a.4;
  - 6) Require the submittal of an 'as built' certification of the post-construction BMPs within 120 days of completion;
  - 7) Perform and/or require the performance of, at a minimum, an annual post-construction inspection to ensure that design standards are being met and require corrective actions to poorly functioning or inadequately maintained post-construction BMPs. The Permittee shall document its post-construction inspection. Such documentation shall include, at a minimum:
    - a. Facility type
    - b. Inspection date

- c. Name and signature of inspector
  - d. Site location
  - e. Owner information (name, address, phone number, fax, and email)
  - f. Description of the storm water BMP condition that may include the quality of: vegetation and soils, inlet and outlet channels and structures, embankments, slopes, and safety benches; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures;
  - g. Photographic documentation of all critical storm water BMP components;
  - h. Specific maintenance items or violations that need to be corrected by the owner/operator of the storm water control or BMP; and
  - i. Maintenance agreements for long-term BMP operations and maintenance.
- 8) The Permittee shall maintain or require the developer/ owner/operator to keep records of post-construction inspections, maintenance activities and make them available to the Department upon request;
- 9) Require and/or perform adequate long-term operation and maintenance of post-construction BMPs, including one or more of the following, as applicable:
- a. The developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; and/or
  - b. Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or
  - c. Written conditions in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control management practices; and/or
  - d. Any other legally enforceable agreement that assigns permanent responsibility for maintenance of structural or treatment control management practices.
- b. The Permittee shall include within the SWMPP the following information:
- 1) Procedures to develop, implement and enforce systems of appropriate structural and/or non-structural BMPs;
  - 2) Procedures to develop, implement and enforce performance standards;
  - 3) Procedures for encouragement of the utilization of LID/green infrastructure practices;
  - 4) Procedures to ensure compliance with the ordinance or regulatory mechanism, including the sanctions and enforcement mechanisms the Permittee will use to ensure compliance. If an ordinance or regulatory mechanism needs to be developed, then the Permittee must provide a timeline for the development of the ordinance and/or regulatory mechanism;
  - 5) Procedures for post-construction inspections, to include tracking and enforcement;
  - 6) Procedures to ensure adequate long-term operation and maintenance of BMPs; and,
  - 7) Development of an inventory of post-construction structural controls.
- c. The Permittee shall report each year in the annual report the following information:

- 1) Provide a hyperlink for the ordinance or regulatory mechanism location on the Permittee's website;
- 2) A list of the post-construction structural controls installed and inspected during the permit year;
- 3) Updated inventory of post-construction structural controls including those owned by the Permittee;
- 4) Number of inspections performed on post-construction structural controls; and,
- 5) Summary of enforcement actions.

## 6. Spill Prevention and Response

- a. The Permittee shall further develop/revise and implement a program to prevent, contain, and respond to spills that may discharge into the MS4. The Permittee must, at a minimum:
  - 1) Investigate, respond, and conduct response actions or coordinate w/other agencies that may provide response actions as outlined in the SWMPP;
  - 2) Develop a mechanism to track spills, response, and cleanup activities for all spills;
  - 3) Use GIS or acceptable mapping scheme to identify spill locations, locations for inspections, and chronic problem areas;
  - 4) Implement a spill prevention/spill response plan;
  - 5) Provide training of appropriate personnel in spill and response procedures and techniques to mitigate pollutant discharges from spills to the MS4; and
  - 6) Establish procedures to ensure that all spills are able to be promptly reported to appropriate authority.
- b. The Permittee shall include within the SWMPP the following information:
  - 1) The spill prevention/spill response plan; and
  - 2) Procedures to provide training of personnel in spill prevention and response.
- c. The Permittee shall report each year in the annual report the following information:
  - 1) Summary of spills occurring during the reporting year, to include the following, at a minimum:
    - a. Location;
    - b. Spill Substance (i.e. fuel, oil, etc);
    - c. Photographs (Spill and After clean-up) to be made available upon request; and
    - d. Incident dates and time to resolution, including any enforcement actions taken and their result.
  - 2) Documentation of employee training as required by Part II.B.6.b.2
    - a. Title of Training Presentations; and
    - b. Dated Attendance Sheets.

## 7. Pollution Prevention/Good Housekeeping for Municipal Operations

- a. The Permittee shall further develop/revise, implement, and maintain a program that will prevent or reduce the discharge of pollutants in storm water run-off from municipal operations to the MEP. The program elements shall include, at a minimum, the following:



- 1) An inventory of all municipal facilities, including municipal facilities that have the potential to discharge pollutants via storm water runoff;
  - 2) Develop and implement a short and long term strategy and program for the removal of trash from the waterways and tributaries in the permitted area in such a manner to quantify the removal of trash per year, which shall be included in the annual report. These strategies shall be included in the Permittee's SWMPP and shall be updated as necessary. This program shall address the following, at a minimum:
    - a. Direct removal of trash from waterbodies;
    - b. Direct removal of trash from the MS4;
    - c. Direct removal of trash prior to entry to the MS4;
    - d. Prevention through disposal alternatives; and
    - e. Prevention through waste reduction practices, additional enforcement, and/or initiatives.
  - 3) Require the following measures to be implemented in the public right of way for any event or wherever it is anticipated that substantial quantities of trash or litter may generated:
    - a. Arrangement for temporary protection of preventative measures to the catch basins, where feasible, and
    - b. Provide proper disposal of trash receptacles, clean up of catch basins, as needed, and grounds of the event area within one business day subsequent to the event.
  - 4) Ensure that trash receptacles, or similar trash capturing devices are provided and maintained in areas identified as high trash generated areas;
  - 5) A Standard Operating Procedures (SOP) detailing good housekeeping practices to be employed at appropriate municipal facilities and during municipal operations that may include, but not limited to, the following:
    - a. Equipment washing;
    - b. Street sweeping;
    - c. Maintenance of municipal roads owned, operated, or under the responsibility of the Permittee;
    - d. Storage and disposal of chemicals and waste materials;
    - e. Vegetation control, cutting, removal, and disposal of the cuttings;
    - f. Vehicle fleets/equipment maintenance and repair;
    - g. External Building maintenance; and
    - h. Materials storage facilities and storage yards.
  - 6) A program for inspecting municipal facilities, to include municipal maintenance shops and equipment yards, for good housekeeping practices, including BMPs. The program shall include checklists and procedures for correcting noted deficiencies;
  - 7) A training program for municipal facility staff in good housekeeping practices as outlined in the SOP developed pursuant to Part II.B.7.a.(5); and
  - 8) The Permittee shall assess the water quality impacts for those flood management projects owned, operated, or the responsibility of the Permittee. The feasibility of retro-fitting existing structural control devised to provide additional pollutant removal from the storm water shall be evaluated.
- b. The Permittee shall include within the SWMPP the following information:

- 1) The inventory of municipal facilities required by Part II.B.7.a.(1);
- 2) Schedule for developing the SOP of good housekeeping practices required by Part II.B.7.a.(5);
- 3) An inspection plan and schedule, including checklists and any other materials needed to comply with Part II.B.7.a.(6); and
- 4) A description of the training program and training schedule required by Part II.B.7.a.(7).

c. The Permittee shall report each year in the annual report the following information:

- 1) Any updates to the municipal facility inventory;
- 2) An estimated amount of floatable material collected from the MS4 as required by Part II.B.7.a.(2-4);
- 3) Any updates to the inspection plan;
- 4) Any updates to the SOP of good housekeeping practices; and
- 5) Summary of inspection reports of municipal facilities

d. The Permittee shall maintain the following information and make it available upon request:

- 1) Records of inspections and corrective actions, if any; and
- 2) Training records including the dates of each training activities and names of personnel in attendance.

## 8. Application of Pesticide, Herbicide, and Fertilizers (PHFs)

a. For the *Application of Pesticide, Herbicide, and Fertilizers (PHFs)*, the Permittee shall implement controls to reduce, to the *MEP*, 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. The Permittee shall implement programs to encourage the reduction of the discharge of pollutants related to application and distribution of PHFs. For those controls implemented, the Permittee will obtain coverage and maintain compliance with ADEM NPDES Pesticide General Permit ALG870000, if applicable, or other applicable NPDES permits. In addition, the Permittee shall address priorities to include the following:

- 1) Identify all areas known to receive high applications of PHFs, develop a program to detect improper usage, and prioritize problem areas;
- 2) Require evidence of proper certification and licensing for all applicators contracted to apply pesticides or herbicides on municipal property; require that applicators contracted to apply fertilizer are qualified in utilizing proper nutrient management practices;
- 3) Maintain an inventory of on-hand PHFs with information about the formulations of various products, including how to recognize the chemical constituents from the label, their respective uses, directions and precautions for applicators that explain if products should be diluted, mixed or only used alone, and, proper storage of products;
- 4) Equipment use and maintenance;
- 5) Training in safe use, storage and disposal of PHFs;
- 6) Inspection and monitoring of facilities where PHFs are stored; and
- 7) Record keeping.

## 9. Oils, Toxics, and Household Hazardous Waste Control

- a. The Permittee shall prohibit to the MEP the discharge or disposal of used motor vehicle fluids and household hazardous wastes into the MS4. Specific activities to be completed under this item are:
  - 1) Make available material educating the public about used oil facility locations, hotline numbers, and alternatives to toxic materials;
  - 2) Advertise the location of used oil collection facilities; and
  - 3) Provide employee training on spill prevention at all municipal facilities where oils or toxic materials are used.
- b. The Permittee shall include within the SWMPP the following information:
  - 1) Procedures to develop, implement, and enforce a program for oils, toxics, and household hazardous waste control to include educational information and employee training.
- c. The Permittee shall report each year in the annual report the following information:
  - 1) Quantities of Household Hazardous Waste and used oil collected; and
  - 2) Oils, Toxics, and Household Hazardous Waste Control training workshops
    - a. Dated attendance sheet; and
    - b. Titles of presentations.

## 10. Industrial Storm Water Runoff

- a. The Permittee shall implement a program to inspect, monitor and control pollutants in storm water runoff to the MS4 from municipal waste landfills, hazardous waste treatment, storage, disposal and recovery facilities, and industrial facilities and high risk commercial facilities. Facilities to be addressed under this program include: facilities that have reported under the requirements of the Emergency Planning and Community Right to Know Act (EPCRA) Title III, Section 313; and any other industrial or commercial discharge that the Permittee determines is contributing substantial pollutants loading to the MS4 ("high risk facilities"). The program must provide for, at a minimum:
  - 1) Annual inspections of municipal waste landfills, hazardous waste treatment, storage, disposal (TSD) and recovery facilities;
  - 2) Annual inspections, at a minimum, of industrial facilities and high-risk commercial facilities that do not have an NPDES permit issued by the Department as outlined in the SWMPP, and
  - 3) Data collected by a NPDES permitted facility to satisfy the monitoring requirements of an NPDES, State, land application or local pretreatment discharge permit may be used to satisfy Part II.B.10.a of the Permit. The Permittee may require the facility to conduct self-monitoring to satisfy this requirement, if necessary.
- b. The Permittee shall include in the SWMPP a list of all municipal waste landfills, hazardous waste treatment, storage, disposal and recovery facilities, high risk commercial facilities, and industrial facilities, both NPDES permitted and non-NPDES permitted, within the MS4.

- c. The Permittee shall include in the annual report a summary of inspections performed for the year and enforcement, if applicable.

### **C. *Legal Authority***

To the extent allowed under State law, the Permittee must review and revise its relevant ordinances or other regulatory mechanisms, or adopt any new ordinances that provide it with adequate legal authority to control pollutant discharges into and from its MS4, and to implement and enforce its SWMPP. To be considered adequate, this legal authority must, at a minimum, authorize the Permittee to:

1. Prohibit non-storm water discharges unless such storm water discharges are in compliance with a separate NPDES permit, or determined by the Department not to be a significant contributor of pollutants to waters of the State;
2. Prohibit and eliminate illicit connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4;
3. Control the discharge of spills, and prohibit dumping or disposal of materials other than storm water into the MS4;
4. Require operators of construction sites and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 to the maximum extent practicable through the installation, implementation, and maintenance of appropriate controls, including installation, implementation and long-term maintenance of post construction controls;
5. Request information to determine compliance with ordinances or other regulatory mechanism;
6. Inspect and monitor at reasonable times any facilities, equipment, practices, or operations for active or potential polluted storm water discharges to the MS4;
7. Promptly require that dischargers cease and desist discharging and/or clean-up and abate a discharge;
8. Levy citations or administrative fines against responsible parties to include but not limited to non-compliant construction sites;
9. Require recovery and remediation costs from responsible parties; and
10. Provide the authority to enter into interagency agreements with other entities for the purpose of controlling the contribution of pollutants to the maximum extent practicable from one MS4 to another MS4.

### **D. *SWMPP Plan Review and Modification***

1. The Permittee shall submit to the Department within nine months of the effective date of this permit a SWMPP. The Permittee shall implement plans to seek and consider public input in the development, revision and implementation of this SWMPP, as required by Part II.B.2.b.1. Thereafter, the Permittee shall perform an annual review of the current SWMPP and must modify the SWMPP, as necessary, to maintain compliance with the permit. Any modifications to the SWMPP shall be submitted to the Department at the time a modification is made. Modifications made to the SWMPP may include, but are not limited to, the replacement of ineffective or infeasible BMPs or the addition of components, controls and requirements.
2. The Permittee shall implement the SWMPP on all new areas added to their municipal separate storm sewer system (or for which they become responsible for implementation of storm water quality controls) as soon as practicable. Implementation of the program in any new area shall consider the plans of the SWMPP of the previous MS4 ownership, if any.

***E. Impaired Waters and Total Maximum Daily Loads (TMDLs)***

1. The Permittee must determine whether the discharge from any part of the MS4 contributes directly or indirectly to a waterbody that is included on the latest §303(d) list or designated by the Department as impaired;
2. If the Permittee's MS4 discharges to a waterbody included on the latest §303(d) or designated by the Department as impaired, it must demonstrate the discharges, as controlled by the Permittee, do not cause or contribute to the impairment. The SWMPP must detail the BMPs that are being utilized to control discharges of pollutants associated with the impairment. If existing BMPs are not sufficient to achieve this demonstration, the Permittee must, within six (6) months following the publication of the latest final §303(d) list, Department designation, or the effective date of this permit, submit a revised SWMPP detailing new or modified BMPs. The SWMPP must be revised as directed by the Department and the new or modified BMPs must be implemented within one year from the publication of the latest final §303(d) list or Department designation.
3. Permittees discharging from MS4s into waters with EPA-Approved TMDLs and/or EPA-Established TMDLs
  - a. The Permittee must determine whether its MS4 discharges to a waterbody for which a total maximum daily load (TMDL) has been established or approved by EPA. If an MS4 discharges into a water body with an EPA approved or established TMDL, then the SWMPP must include BMPs targeted to meet the assumptions and requirements of the TMDL. If additional BMPs will be necessary to meet the requirements of the TMDL, the SWMPP must include a schedule for installation and/or implementation of such BMPs. A monitoring component to assess the effectiveness of the BMPs in achieving the TMDL requirements must also be included in the SWMPP. Monitoring can entail a number of activities including, but not limited to: outfall monitoring, in-stream monitoring, and/or modeling. Monitoring data, along with an analysis of this data, shall be included in the Annual Report.
  - b. If, during this permit cycle, a TMDL is approved by EPA or a TMDL is established by EPA for any waterbody into which an MS4 discharges, the Permittee must review the applicable TMDL to see if it includes requirements for control of storm water discharges from the MS4.
    - a. If it is found that the Permittee must implement specific allocations of the TMDL, it must assess whether the assumptions and requirements of the TMDL are being met through implementation of existing BMPs or if additional BMPs are necessary. The SWMPP must include BMPs targeted to meet the assumptions and requirements of the TMDL. If existing BMPs are not sufficient, the Permittee must, within six (6) months following the approval or establishment of the TMDL by EPA, submit a revised SWMPP detailing new or modified BMPs to be utilized along with a schedule of installation and/or implementation of such BMPs. Any new or modified BMPs must be implemented within one year, unless an alternate date is approved by the Department, from the establishment or approval of the TMDL by EPA. A monitoring

component to assess the effectiveness of the BMPs in achieving the TMDL requirements must also be included in the SWMPP. Monitoring can entail a number of activities including, but not limited to: outfall monitoring, in-stream monitoring, and/or modeling. Monitoring data, along with an analysis of this data, shall be included in the Annual Report.

**F. Responsibilities of Permittee**

If the Permittee is relying on another entity to satisfy one or more requirements of this permit, then the Permittee must note that fact in the SWMPP. The Permittee remains responsible for compliance with the permit and reliance on another entity will not be a defense or justification for non-compliance if the entity fails to implement the permit requirements.

**PART III Monitoring and Reporting**

The Permittee shall implement a monitoring program to provide data necessary to assess the effectiveness and adequacy of BMPs implemented under the SWMPP. The quality of the streams receiving MS4 discharges shall continue to be monitored to assess the water quality of the streams and to identify potential water quality impairments. This shall be accomplished by the following:

**A. Monitoring Locations**

1. Proposed monitoring locations and descriptions of their respective characteristics shall be described in the SWPPP with actual locations described in the annual report;

Waterbody	Frequency
Shades Creek	Hourly Sonde Annual (Grab) Sample
Cahaba River	Annual (Grab) Sample

2. In addition to the requirements in Part III.A.1., if a waterbody (not listed in Part III.A.1) within the MS4 jurisdiction is 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 EPA, during this permit cycle, then the Permittee must revise its monitoring program to include monitoring that addresses the impairment or TMDL. Any revisions to the monitoring program shall be documented in the SWMPP and Annual Report. In addition, the permit may be modified by the Department to establish the additional or revised monitoring locations.

**B. Monitoring Parameters and Frequency**

1. Water quality data shall be obtained by a water quality probe (i.e sonde) at Shades Creek with a minimum frequency of hourly and shall consist of the following:
  - a. Temperature;
  - b. pH/ORP;
  - c. Turbidity (NTU);
  - d. Conductivity;
  - e. Dissolved Oxygen (mg/l)
  - f. Water level

2. Grab samples shall be collected on Shades Creek and Cahaba River at each instream monitoring station and analyzed for the following parameters:
  - a. E.Coli;
  - b. Total Nitrogen (TN) (mg/l);
  - c. Total Phosphorus (mg/l);
  - d. Total Suspended Solids (TSS) (mg/l);
  - e. Temperature;
  - f. pH/ORP;
  - g. Turbidity (NTU);
  - h. Conductivity;
  - i. Dissolved Oxygen (mg/l);
  - j. Ammonia Nitrogen (NH<sub>3</sub>-N) (mg/l);
  - k. Biochemical Oxygen Demand (BOD) (mg/l);
  - l. Chemical Oxygen Demand (COD) (mg/l);
  - m. Hardness as CaCO<sub>3</sub> (mg/l);
  - n. Nitrate plus Nitrite Nitrogen (NO<sub>3</sub>+NO<sub>2</sub>-N) (mg/l);
  - o. Oil and Grease (mg/l);
  - p. Total Dissolved Solids (TDS) (mg/l);
  - q. Total Kjeldahl Nitrogen (TKN) (mg/l); and
3. The Permittee must include in the instream monitoring program any additional parameters attributed with the latest final §303(d) list or otherwise designated by the Department as impaired or are included in an EPA-approved or EPA-established TMDL.

**C. *Sample Type, Collection and Analysis***

1. Grab samples taken within the first two hours of discharge shall be used for the analysis;
2. Grab samples shall be collected resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event;
3. Analysis and collection of grab samples shall be done in accordance with the methods specified at 40 CFR Part 136. Where an approved 40 CFR Part 136 does not exist, then a Department approved alternative method may be used;
4. If the Permittee is unable to collect grab samples due to adverse conditions, the Permittee must submit a description of why samples could not be collected, including available documentation of the event. An adverse climatic condition which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

**PART IV Annual Reporting Requirements**

1. The Permittee shall submit to the Department an annual report (1 hardcopy and 1 electronic copy) no later than January 31 of each year. The annual report shall cover the previous fiscal year beginning October 1 through September 30.
2. On or after December 21, 2020, all annual reports shall be submitted to the Department electronically in a prescribed manner acceptable to the Department.
3. The Permittee shall sign and certify the annual report in accordance with Part V.K.
4. The annual report shall include the following information, at a minimum, and in addition to those requirements referenced in Part II.B and Part III:

- a. A list of contacts and responsible parties (e.g.: agency, name, phone number, address, & email address) who had input to and are responsible for the preparation of the annual report.
- b. An overall evaluation of the storm water management program developments and progress for the following:
  - 1) Major findings such as water quality improvements or degradation;
  - 2) Major accomplishments;
  - 3) Overall program strengths/weaknesses;
  - 4) Future direction of the program;
  - 5) The Permittee(s) will make an overall determination of the effectiveness of the SWMPP taking into account water quality/watershed improvements; and
  - 6) Required actions that were not performed, and reasons why the actions were not accomplished.
- c. The annual report will include a narrative report of all program elements referenced in Part II.B of this permit. The activities concerning a program element shall be discussed as follows:
  - 1) Program element activities completed and in progress;
  - 2) General discussion of element. Explanation for all element activities that have not been fully implemented or completed. Results of activities shall be summarized and discussed (e.g.: maintenance caused by inspection, pollutants detected by monitoring, investigations as a result of dry and wet weather screening, number and nature of enforcement item, education activities/participation);
  - 3) Status of program element with compliance, implementation, and augmentation schedules in Part II of the permit;
  - 4) Assessment of controls; and
  - 5) Discussion of proposed element revisions.
- d. The annual report shall contain a monitoring section which discusses the progress and results of the monitoring programs required under Part III of the permit and shall include, at a minimum, the following information.
  - 1) Status of implementation of the monitoring program;
  - 2) Map(s) showing the monitoring station locations, latitude/longitude, and narrative site descriptions, including watershed size;
  - 3) Raw data, results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each component of the monitoring program;
  - 4) An analysis of the results of each monitoring program component;
  - 5) A comparison of the reporting year's data to the previous five years of data to establish a trend analysis to determine the relative health of the receiving water;
  - 6) All monitoring reports and supporting data shall be submitted in hardcopy and/or electronically in a format deemed acceptable to the Department concurrently with the submission of the Annual Report; Failure to provide this data in a format appropriate to the Department for review shall be a violation of this permit; and
  - 7) The interpretation of the analytical data, required by Part III.B.1-2 of the Permit, for determinacy of meeting water quality standards.



- e. Provide the status of the implementation and proposed changes to the SWMPP to include assessment of controls and specific improvements or degradation to water quality;
- f. Provide a summary of inspections and enforcement actions for regulatory program. Enforcement actions should include a corrective actions summary;
- g. Implementation status of the public education programs; and
- h. Status of expenditures and budget for the past fiscal year and the next fiscal year for the Permittee's program. The analysis shall indicate budgets and funding sources.

**PART V Standard and General Permit Conditions**

***A. Certification and Signature of Reports***

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with Part V.K. of this permit.

***B. Submittals***

All documents required to be submitted to the Department by this permit, shall be addressed to:

Alabama Department of Environmental Management  
 Stormwater Management Branch, Water Division  
 Post Office Box 301463  
 Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management  
 Stormwater Management Branch, Water Division  
 1400 Coliseum Blvd  
 Montgomery, Alabama 36110-2059

***C. Retention of Records***

The Permittee shall retain the storm water quality management program developed in accordance with Part II of this permit until at least five years after coverage under this permit terminates. The Permittee shall retain all records of all monitoring information, copies of all reports required by this permit, and records required by this permit, and records of all other data required by or used to demonstrate compliance with this permit, until at least three years after coverage under this permit terminates. This period may be explicitly modified by alternative provisions of this permit or extended by request of the Director at any time.

***D. Duty to Comply***

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

***E. Civil and Criminal Liability***

1. Tampering

Any person, who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under this permit shall, upon conviction, be subject to penalties as provided by AWPCA.

2. False Statements

Any person knowingly makes any false statement, representation, or certification in any record or other documentation submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance, shall, upon conviction, be punished as provided by AWPCA

3. Relief from Liability

Nothing in this permit shall be construed to relieve the Permittee(s) of civil and criminal liability under AWPCA or FWPCA for non-compliance with any term or condition of this permit.

***F. Duty to Reapply***

1. If the Permittee intends to continue an activity regulated by this permit beyond the expiration of this permit, the Permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days prior to expiration of this permit.

2. Failure of the Permittee to apply for re-issuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code, Rule 335-6-6.-06, and should the permit not be re-issued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

***G. Need to Halt or Reduce an Activity Not a Defense***

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

***H. Duty to Mitigate***

The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human or the environment.

***I. Duty to Provide Information***

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, suspending, or revoking this permit in whole or in part, or to determine compliance with this permit. The Permittee shall also furnish to the Director upon request copies of records required to be kept by this permit.

***J. Other Information***

If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

**K. *Signatory Requirements***

All reports and forms to be submitted by this permit, AWPCA and the Department's rules and regulations, shall be signed by a "responsible official" of the Permittee, as defined in ADEM Administrative Code, Rule 335-6-6-.09, or a "duly authorized representative" of such official, as defined by ADEM Administrative Code, Rule 335-6-6-.09, and shall bear the following certification:

"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."

**L. *Oil and Hazardous Substance Liability***

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under Section 311 of FWPCA.

**M. *Property and Other Rights***

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of Federal, State, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the State of Alabama.

**N. *Severability***

The provision of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit shall not be affected thereby.

**O. *Compliance with Statutes and Rules***

This permit is issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter that are applicable to this permit are hereby made a part of this permit.

This permit does not authorize the non-compliance with or violation of any laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws.

**P. *Proper Operations and Maintenance***

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a Permittee only when necessary to achieve compliance with conditions of the permit.

**Q. *Monitoring Records***

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The Permittee shall retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of reports required by this permit, and records of all data used to

complete the application of this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended at the request of the Director at any time.

**R. *Monitoring Methods***

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

**S. *Right of Entry and Inspection***

The Permittee shall allow the Director or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon any of the permittee's premises where a regulated facility or activity or point source is located or in which any records must be maintained under conditions of this permit;
2. Have access to and copy, at reasonable times, any records required to be maintained by the terms and conditions of this permit;
3. Inspect, at reasonable times, any point source, any monitoring equipment or practices being maintained to comply with this permit, or any treatment or control or systems being maintained to comply with this permit; and
4. Sample or monitor, at reasonable times, for the purposes of determining permit compliance or as otherwise authorized by AWPCA, any substances or parameters at any location.

**T. *Additional Monitoring by the Permittee***

If the Permittee monitors more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the monitoring report. Such increased monitoring frequency shall also be indicated on the monitoring report.

**U. *Permit Modification and Revocation***

1. This permit may be modified or revoked or reissued, in whole or in part, during its term for cause including but not limited to, the following:
  - a. If cause for termination under Part V.A.3., of this permit exists, the Director may choose to revoke or re-issue this permit instead of terminating the permit;
  - b. If a request to transfer this permit has been received, the Director may decide to revoke and re-issue or to modify the permit; or
  - c. If modification or revocation and re-issuance is requested by the Permittee and cause exists, the Director may grant the request.
2. This permit may be modified during its term for cause, including but not limited to:
  - a. If cause for termination under Part V.A.3., of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
  - b. The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;

- c. Errors in calculation of discharge limitation or typographical or clerical errors were made;
  - d. To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or judicial decision after the permit was issued;
  - e. To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permit may be modified to change compliance schedules;
  - f. To incorporate an applicable Section 307(a) of FWPCA toxic effluent standard or prohibition;
  - g. When required by the re-opener conditions in this permit;
  - h. Upon failure of the State to notify, as required by Section 402(b)(3) of FWPCA, another State whose water may be affected by a discharge permitted by this permit;
  - i. When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions;
  - j. When requested by the Permittee and the Director determines that the modification has cause and will not result in a violation of federal or State law, rules, or regulations;
  - k. To add a new Permittee who is the owner or operator of a portion of the Municipal Separate Storm Sewer System; or
  - l. To change portions of the Storm Water Quality Management Program that is considered permit conditions.
3. This permit may be terminated during its term for cause, including but not limited to, the following:
- a. Violation of any term or condition of this permit;
  - b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance or the permittee's misrepresentation of any relevant facts at any time;
  - c. Materially false or inaccurate statements or information in the permit application or the permit;
  - d. The permittee's discharge threatens human life or welfare or the maintenance or water quality standards; or
  - e. Any other cause allowed by ADEM Administrative Code, Rule 335-6-6.
4. This permit may be suspended during its term for cause, including but not limited to, the reasons for termination listed above.
5. The filing of a request by the Permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term condition.

**V. *Termination of Coverage for a Single Permittee***

Permit Coverage may be terminated, in accordance with the provision of 30 CFR 122.64 and 124.5, for a single Permittee without terminating coverage for other permittees.

**W. *Modification of Storm Water Management Program***

Only those portions of the Storm Water Management Program specifically required as permit conditions shall be subject to modification requirements of 40 CFR 124.5. Replacement of an ineffective or infeasible BMP implementing a required component of the Storm Water Management Program with an alternate BMP expected to achieve the goals of the ineffective or infeasible BMP shall be considered a minor modification to the SWMPP and not modification to the Permit.

**X. *Changes in Monitoring Outfalls***

This permit is issued on a system-wide basis in accordance with CWA §402(p)(3)(i) and authorizes discharges from all portions of the MS4. Since all outfalls are authorized, changes in monitoring outfalls, other than those with specific numeric effluent limitations, shall be considered minor modifications to the permit and will be made in accordance with the procedures at 40 CFR 122.63.

**Y. *Definitions***

1. “Alabama Handbook” means the September 2014 edition of the Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management on Construction Sites and Urban Areas, Alabama Soil and Water Conservation Committee (ASWCC) published at the time permit is effective.
2. “Arithmetic Mean” means the summation of the individual values of any set values divided by the number of individual values.
3. “AWPCA” means Code of Alabama 1975, Title 22, the Alabama Water Pollution Control Act, as amended.
4. “Best Management Practices” (BMPs) means activities, prohibitions of practices, maintenance procedures, and other management practices implemented to prevent or reduce the discharge of pollutants to waters of the State. BMPs also include treatment systems, operating procedures, and practices to control facility runoff, spillage or leaks, sludge or water disposal, or drainage from raw material storage.
5. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility.
6. “Control Measure” as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the State.
7. “CWA” or “The Act” means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.
8. “Department” means the Alabama Department of Environmental Management or an authorized representative.
9. “Discharge”, when used without a qualifier, refers to “discharge of a pollutant” as defined as ADEM Administrative Code 335-6-6-.02(m).



10. "Flood Management Project" means a project that will alter, modify or change the base flood elevation of a 1% annual chance flood event.
11. "Flow-weighted composite sample" means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge at the time of sampling.
12. "Green Infrastructure" refers to systems and practices that use or mimic natural processes to infiltrate, evapotranspire (the return of water to the atmosphere either through evaporation or by plants), or reuse stormwater or runoff on the site where it is generated.
13. "Hydrology" refers to the physical characteristics of storm water discharge, including the magnitude, duration, frequency, and timing of discharge.
14. "Illicit connection" means any man-made conveyance connecting a non-storm water discharge directly to a municipal separate storm sewer system.
15. "Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit.
16. "Industrial Land Use" means land utilized in connection with manufacturing, processing, or raw materials storage at facilities identified under Alabama State Law.
17. "Infiltration" means water other than wastewater that enters a sewer system, including foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.
18. "Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.
19. "Large" municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 250,000 or more as determined by the latest decennial census.
20. "Low Impact Development" (LID) is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product.
21. "Major outfall" is the point(s) where the MS4 discharges to a water of the State from (1) a pipe (or closed conveyance) system with a cross-sectional area equal to or greater than 7.07 square feet (e.g., if a single circular pipe system, an inside diameter of 36 inches or greater),(2) a single conveyance other than a pipe, such as an open channel ditch, which is associated with a drainage area of more than 50 acres,(3) a pipe (or closed conveyance) system draining "industrial land use" with a cross-sectional area equal to or greater than 0.79 square feet (e.g., if a single circular pipe system, an inside diameter of 12 inches or greater),(4) or a single conveyance other than a pipe, such as an open channel ditch, which is associated with an "industrial land use" drainage area of more than 2 acres;For the purpose of this permit, outfalls of the "double barrel" type, whose combined cross-sectional area is greater than 7.07 square feet, equivalent to a single circular pipe outfall with an inside diameter of 36 inches or greater, are also considered major outfalls.

22. "MEP" is an acronym for "Maximum Extent Practicable," the technology-based discharge standards and controls necessary for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by CWA Section 402(p). These standards and controls may consist of a combination of best management practices, control techniques, system design and engineering methods, and such other provisions for the reduction of pollutants discharged from a MS4 as described in the storm water management system.
23. "Medium" municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more but less than 250,000 as determined by the latest decennial census.
24. "MS4" is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to either a large, medium, or small municipal separate storm sewer system. The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities.
25. "Municipal Separate Storm System" is defined at 40 CFR Part 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined in ADEM Administrative Code 335-6-6-.02(nn).
26. "Permittee" means each individual co-applicant for an NPDES permit who is only responsible for permit conditions relating to the discharge that they own or operate.
27. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
28. "Priority Construction Site" means any qualifying construction site in an area where the MS4 discharges to a waterbody which is listed on the most recently approved 303(d) list of impaired waters for turbidity, siltation, or sedimentation, any waterbody for which a TMDL has been finalized or approved by EPA for turbidity, siltation or sedimentation, any waterbody assigned the Outstanding Alabama Water use classification in accordance with ADEM Admin. Code r. 335-6-10-.09, and any waterbody assigned a special designation in accordance with 335-6-10-.10.
29. "Qualifying Construction Site" means any construction activity that results in a total land disturbance of one or more acres and activities that disturb less than one acre but are part of a larger common plan of development or sale that would disturb one or more acres. Qualifying construction sites do not include land disturbance conducted by entities under the jurisdiction and supervision of the Alabama Public Service Commission.
30. "Qualifying New Development and Redevelopment" means any site that results from the disturbance of one acre or more of land or the disturbance of less than one acre of land if part of a larger common plan of development or sale that is greater than one acre. Qualifying new development and redevelopment does not include land disturbances conducted by entities under the jurisdiction and supervision of the Alabama Public Service Commission.

31. "Storm water" is defined at 40 CFR Part 122.26(b)(13) and means storm water runoff, snow melt runoff, and surface runoff and drainage.
32. "Structural Controls" means an engineered BMP constructed with rigid walls and/or weirs and piped drainage that utilize active or passive treatment and/or mechanical systems for the purpose of treating storm water runoff.
33. "Structural Flood Control" means structural measures that control the 1% annual chance floodwaters by construction of barriers, storage areas or by modifying / redirecting channels.

## ALABAMA STORMWATER PARTNERSHIP RESPONSE TO COMMENTS

**Comment (1):** *Storm Water Collection System Operations* – Like the other structural controls in this section, roadside ditches should be operated, inspected and maintained. Under federal regulations, “ditches” are “used for collecting or conveying stormwater” and the MS4 is responsible for these ditches. 40 CFR Part 122.26(b)(8). Roadside ditches are an integral component of the MS4 that may have significant potential for improving or degrading the water quality of the MS4 discharge. For example, efforts by the municipality to reduce channel erosion within roadside ditches will reduce sediment loading from the MS4 discharge. Structural controls are defined under Part V, Section Y, as “...an engineered BMP constructed with rigid walls and/or weirs and piped drainage that utilize active or passive treatment and/or mechanical systems for the purpose of treating storm water runoff.” This definition would exclude roadside ditches as those are not ‘constructed with rigid walls’. However, such conveyances are integral for stormwater conveyance and to some degree the infiltration of stormwater. Minimizing erosion in those conveyances is crucial for protecting water quality of storm water discharges by the municipality.

We urge ADEM to either modify the definition of what constitutes a ‘structural control’ or include an additional section in these permits that addresses the integrity and erosion potential of conveyances, whether those are constructed of concrete or are earthen or grass-lined conveyances.

**Response (1):** A municipal separate storm sewer is defined in 40 CFR 122.26(b)(8) as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) which is owned or operated by a public body designed or used for collecting or conveying storm water. The intent of the draft permit is to require the Permittee to implement, maintain and enforce a comprehensive stormwater management program which involves using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate to reduce the **discharge of pollutants** from its municipal separate storm sewer system (MS4) consistent with Section 402(p)(3)(B) of the Clean Water Act and 40 CFR Part 122.26. Since “ditches” is included as part of the definition of MS4s then they are considered conveyances, not structural controls, unless they are designed to infiltrate stormwater. The Department believes that the Draft Permit addresses the commenter’s concerns and no changes were made based on this comment.

**Comment (2):** Additionally, we have previously requested that at least the number of inspections of the structural controls be reported in the annual report. We believe this was ADEM’s intention since in its response to the Alabama Stormwater Partnership comments on Trussville’s draft permit, ADEM wrote, “The Permittee is required to include in the annual report the number of inspections performed on the structural controls to include follow-up inspections. (Part II.B.1.a.iv.1).” ADEM Response 1 to the ASP Comments. However, Trussville’s permit and these new draft permits are still written in a way to allow

the number of inspections to “be made available upon request”. II.B.1.a.iv.1. These permits currently state that the number of inspections AND the inspection documentation shall be made available upon request. We recommend deleting the “and” so that just the inspection documentation shall be made available upon request consistent with ADEM’s intent.

**Response (2):** The Department believes that the language in Part II.B.1.a.iv.1 of the Draft Permit is clear; however, to provide additional clarity, Part II. B.1.a.iv.1 language has been revised to state: “The number of inspections performed on structural controls, to include follow-up inspections. The inspection documentation (i.e. checklist) shall be made available upon request.”

**Comment (3):** *Public Education and Public Involvement on Storm Water Impacts* - The SWMPP is required to provide a mechanism to “Seek and consider public input in the development, revision and implementation of the SWMP.” Of the Public Education and Public Involvement programs available for review on various MS4 websites, there is proportionately much more emphasis on education than on seeking input and public involvement to guide stormwater programs. Most programs have good information to share, but none that we have reviewed have a formal avenue for input from the public beyond reporting potential stormwater problems. This aspect of this program element needs greater emphasis. For example, none of these municipalities have invited input on the development of their SWMPP on their websites or have a process in place to inform known stakeholders of the opportunity for involvement. It is very difficult for the public to be aware these opportunities are available unless the MS4s make some effort to notify the public that such an effort is underway.

Recently, the City of Oxford passed an ordinance to establish a Citizen Advisory Committee for their Stormwater Program. We understand this was done in part due to ADEM’s encouragement. We hope you will also encourage the MS4s that are the focus of these permits to establish a similar stormwater Citizen Advisory Committee

**Response (3):** With regards to several of the entities referenced in your comments (Homewood, Irondale, Mountain Brook, Vestavia Hills), their permits are still draft permits, and this requirement within the draft permits (Part II.D.1) will not take effect until the permits are effective. Also, JCHD is not a MS4 Permittee. Regarding the remainder of the entities mentioned in your comments, your comment stated that none of these municipalities have invited input on the development of their SWMPP on their websites or have a process in place to inform known stakeholders of the opportunity for involvement. While Part II.B.2.b.1 of the Draft Permit requires the Permittee to seek and consider public input in the development, revision and implementation of the SWMPP, it does not specify the mechanism the Permittee must implement to accomplish this requirement. This allows flexibility for each Permittee to determine what practice(s) to utilize in notifying its stakeholders regarding input and participation in the development of the stormwater program. For example, one Phase II MS4 Permittee sent a letter to its citizens, notifying them of the SWMPP and instructions on how to become involved in the stormwater program. This letter was included in the City’s SWMPP submitted to the Department.

As required by Part II.D.1 of the Draft Permit, the Permittee is required to submit a SWMPP to the Department, and the Permittee shall implement plans to seek and consider public input in the development, revision and implementation of **this** SWMPP. Therefore, the Department believes that the Permittee will be seeking and accepting public input on its SWMPP if you have any concerns you would like to relay to the Permittee.

With regard to Oxford, please note that a Citizen Advisory Committee was one of the possible public involvement options listed in the 2011 Phase II MS4 General Permit (ALR040000 Part III.B.2.(b)iv).

**Comment (4):** *Illicit Discharge Detection and Elimination (IDDE)* – We encourage these MS4s to develop the investigation protocols for IDDE efforts as required by these permits. While this capacity is a requirement of this draft permit and of the previous applicable permits, some MS4s are still weak in this area. For example, fecal coliforms (probably from an illicit discharge) have contaminated Shades Creek near Elder Street in Birmingham for many years. We and Alabama Water Watch Volunteers have reported this problem only to be told by the City of Birmingham that this is Jefferson County’s and told by Jefferson County Environmental Services Department that Birmingham is responsible. Similarly, where Valley Creek emerges from under downtown Birmingham, significant fecal contamination has been documented for many years. We understand that such problems are very difficult to resolve; however, this emphasizes the need for ADEM to set a deadline for the resolution of IDDE problems. For example, ADEM could model the deadline that Tennessee includes in its Phase II permit: illicit discharges should be removed as “soon as practicable, but not longer than xx days, unless an appropriate deadline is approved”. Also, the way these draft permits are currently written give the MS4s an out. Immediate cessation is only required until after “identification of the responsible party” which as we have seen, takes years. II.B.3.a.2.b

None of the SWMPs we have reviewed have or describe an explicit protocol for tracing the source of such problems nor is there any reference to following the sampling / detection protocol outlined in the EPA Guidance Manual by the Center for Watershed Protection as is required by the draft permit. (II.B.3.a.3.-4). This highlights a potential general weakness in the implementation of IDDE programs by even the more sophisticated MS4 programs. We understand that identifying illicit discharges beneath downtown Birmingham is a daunting prospect, but more progress toward that goal is urgently needed to protect public health.

**Response (4):** As defined in 40 CFR 122.26(b)(8), MS4s are a **conveyance or system of conveyances** and therefore, MS4s are not considered to create most illicit discharges. Part II.B.3.a.2.b of the Draft Permit requires the Permittee to remove illicit discharges and requires the immediate cessation of improper disposal practices upon identification of responsible parties. It would be difficult, if not impossible, to remove an illicit discharge without having identified the party responsible for the illicit discharge. Please note that the Draft Permit states that immediate cessation of the discharge is required; however, this may not always be feasible, which is why the Draft Permit states where the removal of

illicit discharges within ten (10) working days is not possible, the ordinance shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4. This language is consistent with previously issued Phase I MS4 permits, and no changes were made to the Draft Permit based on this comment.

Please note that Part I.C.3 of the Draft Permit also prohibits the discharge of sanitary wastewater through cross connections or other illicit discharges through the MS4.

Regarding your comment highlighting a potential general weakness in the implementation of the IDDE programs, several of the entities mentioned in your comments have only recently received a **draft** permit, which included the requirement in Part II.B.3.a.3-4 that references EPA's Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October, 2004. This is not a requirement within their current administratively extended 2001 MS4 Phase I ALS000001 permit. However, based on MS4 audits performed by the Department in 2015 and 2016 on ALS000001 Permittees, it is the Department's understanding that these Permittees have adopted JCDH Guidelines and Standard Operating procedures to include an IDDE program for identifying, tracing and eliminating illicit discharges (2010 Guidelines and Standard Operating Procedures, JCDH website). Since Part II.D. of the Draft Permit requires the Permittee to seek public input in the development, implementation and revision of the SWMPP, you may also voice any concerns regarding components of the IDDE program with the Permittee.

**Comment (5):** *Construction Site Storm Water Runoff Control* – We note that the stormwater programs with the best construction site compliance are those with an ordinance that allow their city inspectors to issue 'stop work' orders. We urge ADEM to strongly encourage MS4s to establish and implement 'stop work' authority when violations are evident on construction sites as a way of controlling pollutants to the Maximum Extent Practicable (MEP).

These draft permits require that the MS4 inspect construction sites every two months, at a minimum, unless consideration of various listed factors dictates that monthly inspections are appropriate. However, most of these listed factors are relevant to the sites in these MS4s, and therefore ADEM should require monthly inspections to avoid ambiguity. For example, four of these MS4s eventually drain to the Cahaba River, the focus of a watershed siltation TMDL. Additionally, most of the area within these MS4s has been developed, leaving almost exclusively marginal development sites located on steep, difficult locations. One of those factors listed is 'proximity to receiving waterbodies'. We agree that the question of whether a discharge to receiving waters occurs is relevant, however, it should not be the determining factor. Eventually, any pollutant discharge that does not assimilate will be delivered to the waters of the US and be carried downstream. From our perspective, it would be very unlikely to impossible to identify a construction site in these MS4s that does not qualify as being a significant threats to water quality or one that is not a 'Priority Construction Site'. We suggest ADEM require monthly inspections of construction sites



by the MS4s in the upper Cahaba River to avoid any possible confusion about the appropriate inspection regime.

**Response (5):** The Draft Permit requires, in Part II.B.4.a.9, for the Permittee to implement an enforcement response plan (ERP), which sets out the Permittee's potential responses to violations through progressively stricter actions. This may include, but not be limited to: verbal warnings, written notices, and escalated enforcement measures (i.e. citations, stop work orders, etc).

Regarding your inspection comment, Part II.B.4.a.6 of the Draft Permit requires sites that are located within a priority areas to be inspected monthly, at a minimum. Also, other sites that are determined by the Permittee or the Permitting Authority to be a significant threat to water quality shall be monitoring monthly, at a minimum. Part II.B.4.b.2 of the Draft Permit requires the Permittee to submit within the SWMPP a site inspection plan meeting the requirements of Part II.B.4.a.6. The Department reviews all SWMPPs and provides comments as deemed appropriate. Also, please note that the public has an opportunity to engage in the development and implementation of the Permittee's SWMPP as detailed in Part II.D.1. of the Draft Permit, so any concerns you may have regarding construction site inspections may also be addressed with the individual Permittee.

**Comment (6):** *Post-Construction Stormwater Management in Qualifying New Development and Re-Development* –We encourage ADEM to specifically note in Part II, B.) 5.) a.) 2.) that the maximum extent practicable standard includes adoption of BMPs that minimize the magnitude of stormwater runoff volume. An engineer might assume that the definition of magnitude provided at *Y. Definitions 12. "Hydrology"* only addresses the magnitude of the 'runoff rate' and fail to include a consideration of the magnitude of the volume of stormwater runoff. In fact, the training many engineers have received focused exclusively on management of runoff *rates* and not on management of runoff volume. Alternatively, the definition of "Hydrology" in *Y. Definitions 12. "Hydrology"* should be amended to make that clarification.

**Response (6):** The Department believes that the definition of hydrology provides the Permittee with an understanding of what must be performed to comply with Part II.B.5 of the Draft Permit. Additionally, the definition used in the Draft Permit is consistent with the other recently-issued MS4 Phase I Permits. No changes were made to the Draft Permit in response to this comment.

**Comment (7):** ADEM is aware that we believe the post-construction standard included in AL MS4 permits (1.1" value as the basis for the design and implementation of post-construction BMPs) is inadequate to mimic, to the maximum extent practicable, the pre-construction hydrology of a development project to the extent required to reduce instream erosion and pollutant loading to our streams.

ADEM has indicated they do not have the authority to regulate stormwater volume. The Clean Water Act is a minimum standard that must be addressed by the State program. State regulations must be adequate to enforce the federal standard. If Alabama's statutes remain

as a hurdle for adoption of maximum extent practical (MEP) standards, then those fall short of what the federal laws require. There is a clear mandate for ADEM to minimize pollutant discharge to the maximum extent practicable. ADEM has a broad responsibility to manage and regulate discharge of pollutants. Reduction of stormwater runoff volume *will reduce the discharge of pollutants*.

As the Alabama Stormwater Partnership pointed out in their previous comments on Trussville's DRAFT MS4 permit, "The Clean Water Act states and EPA reiterates that 'The statute requires the inclusion of *any* control measures determined to be necessary to reduce the pollutants to the maximum extent practicable. This *compels* the inclusion of controls to reduce the discharge of pollutants to the maximum extent practicable (emphasis added).' We believe that using the 2.2" rain event as the basis for BMP design for the Birmingham area is an essential 'maximum extent practicable' standard justifiable on the basis that it would reduce downstream sediment loading to river segments with a siltation TMDL.

There is a clear mandate for ADEM to minimize pollutant discharge to the maximum extent practicable. ADEM has a broad responsibility to manage and regulate discharge of pollutants. Reduction of stormwater runoff volume *will reduce the discharge of pollutants*.

**Response (7):** Regarding the 1.1 inch rainfall over a 24-hour period preceded by a 72-hour antecedent dry period, this requirement is the basis for the design of the BMPs. Once the BMPs are installed, the landowners/developers will be expected to operate and maintain the BMPs as designed, to the MEP. Importantly, what constitutes MEP is not a "one size fits all," but is determined on a case-by-case basis, which means that provisions may be different for each Permittee.

Regarding your comment for the need to reduce the discharge of pollutants, the intent of the draft Permit is to require the Permittee to implement, maintain and enforce a comprehensive stormwater management program. This involves using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate to reduce the discharge of pollutants **from the MS4** consistent with Section 402(p)(3)(B) of the Clean Water Act and 40 CFR Part 122.26. 40 CFR 122.26(d)(2)(iv)(A)(2) is clear that the Permittee is responsible for controlling the **discharge of pollutants** in stormwater runoff from new developments and significant redevelopments. Please note that flow is not a pollutant under the Clean Water Act. The Department finds that the language in the Draft Permit regarding post construction controls is appropriate, and the design storm specified in the Draft Permit meets the statutory and regulatory requirements.

In addition, the Permittee shall not cause or contribute to violations of Alabama Water Quality Standards, and shall be in compliance with applicable TMDLs. Part II.E of the Draft Permit contains requirements regarding discharges into a water body with an EPA-approved or established TMDL, including BMPs targeted to meet the assumptions and requirements of the TMDL, schedules for installation and/or implementation of such

BMPs, and monitoring to assess the effectiveness of the BMPs in achieving the TMDL requirements.

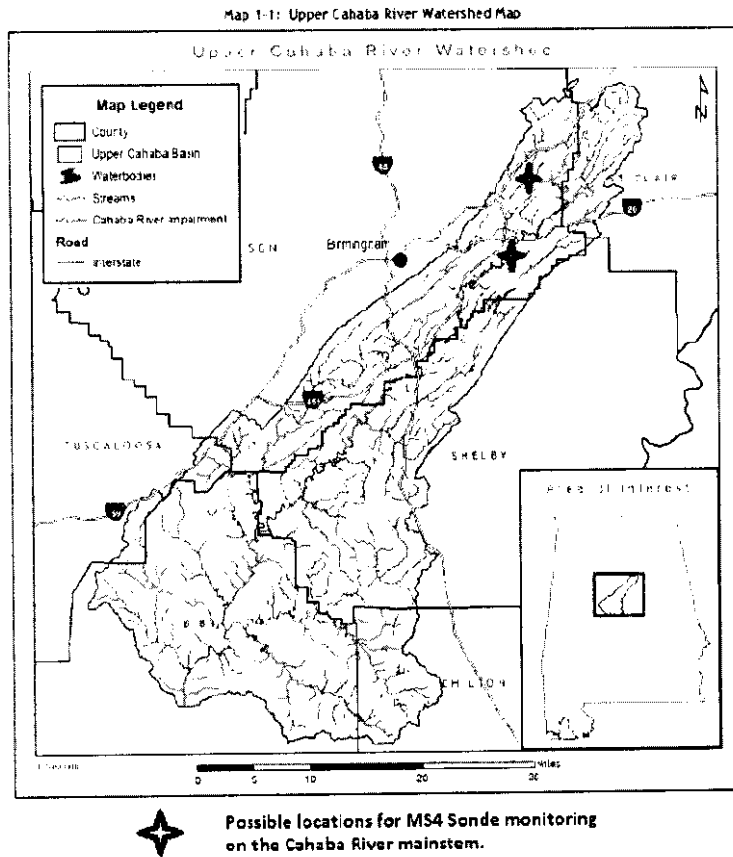
**Comment (8):** *Spill Prevention and Response* – Our review of on-line SWMPs reveals that MS4s rarely have vigorous spill prevention programs. The SWMPs generally say ‘We rely on the Fire Department for Spill Response’. The available SWMPs rarely address the spill ‘prevention’ component of the program.

Their ‘response’ component of Spill Prevention and Response programs available on-line are often limited to reliance on whatever response the local fire department may undertake. The adequacy of that response is not clear. The MS4’s SWMP should spell out greater details about the resources and capabilities of what their fire departments can do per the requirements in the permits, especially if the MS4 is relying on those departments. Hoover’s Program is an exception that sets a good standard in this regard. We urge ADEM to encourage other MS4s to emulate Hoover’s Spill Prevention and Response Program.

**Response (8):** Part II.B.6.a.1 of the Draft Permit requires the Permittee to investigate, respond and conduct, but does allow a Permittee to coordinate with other agencies that may provide response actions as outlined in the SWMPP. The Department reviews all SWMPPs and provides comments as deemed appropriate. Also, please note that the public has an opportunity to engage in the development and implementation of the Permittees SWMPP as detailed in Part II.D.1. of the Draft Permit, so any concerns you may have regarding the spill prevention and response programs may also be addressed with the individual Permittee.

**Comment (9):** Evaluating the efficacy of these MS4 programs relies entirely on adequate water quality monitoring. ADEM places emphasis on monitoring 303(d) and TMDL waters. Based on the distribution of Sonde monitoring locations and the statistical inadequacy of ‘annual grab’ sampling (described in detail below), the proposed monitoring by MS4s, when pooled together, will not be adequate to make a statistically valid assessment of water quality conditions in the Cahaba River. The proposed collective monitoring approach will be inadequate as a basis to require MS4s to adopt enhanced BMPs should their current programs fail to achieve water quality and biological improvements. We renew our request that ADEM facilitate a joint monitoring plan for the upper Cahaba River basin that will provide the data necessary to meet MS4 expectations and allow shared costs and shared data. We understand that ADEM’s implementation of the MS4 program tries to balance the requirements of the MS4 regulations with the MEP capabilities of the permittees. It is also important to ensure that the MS4 investments in monitoring will be cost effective, that these investments will yield actionable data and are coordinated with all monitoring in the basin to address gaps and overlaps. CRS would like to be a stakeholder and resource towards development of that program. In the meantime,

the monitoring requirements of the MS4 permits must be enhanced.



We believe that collecting hourly Sonde data will be very helpful. Unfortunately, it appears that no MS4 downstream of Vestavia Hills will be collecting this type of information for the Cahaba River mainstem. The overall health of the basin would be served if ADEM required one of the downstream MS4s to locate a Sonde in the Cahaba River mainstem. A comparison of such data with that collected by Trussville and the City of Vestavia would be very informative.

The map above, modified from the Cahaba Siltation (Habitat Alteration) TMDL, shows the approximate deployment locations of proposed monitoring Sondes in the Upper Cahaba basin. While data from these locations will be valuable, a considerable portion of the upper Cahaba subject to the Siltation TMDL, and still within an MS4 jurisdiction, will not be monitored. The table below arranges MS4 Monitoring activity in roughly an upstream to downstream order within the Cahaba River basin:

MS4	Hourly Sonde Monitoring <sup>†</sup>	Grab Sample Location (frequency)
Trussville	Cahaba River	Cahaba (semi-annual*) Pinchgut Cr (semi-annual) Dry Cr (semi-annual)
Irondale		Cahaba (annual) Shades Cr (annual)
Vestavia	Cahaba River	Cahaba (annual) Patton Cr (annual)
Homewood	Shades Creek	Shades Cr (annual) Tributaries of Shades (annual)
Mountain Brook		Shades Cr (annual) Tributaries of Shades (annual)
Hoover	Patton Creek (two locations) Lee Branch	
Alabaster		Buck Creek, multiple locations (quarterly**)
Pelham		Buck Creek (quarterly) Cahaba Valley Cr (quarterly) Pea Vine Cr (biannually***)
Helena		Cahaba (semi-annual) Buck Creek (semi-annual)
Shelby County	Cahaba Valley Creek	Cahaba Valley Cr (semi-annual) Lee Branch (semi-annual)

<sup>†</sup> Hoover's Sonde measurements are collected at 15 minute intervals.

\* Semi-annual means two times per year.

\*\* Quarterly means four times per year.

\*\*\* Biannual means once per two years.

These draft permits direct some MS4s to collect 'turbidity' data using Sonde technology. However, the Cahaba Siltation (Habitat alteration) TMDL focuses on Total Suspended Solids (TSS). If the TMDL is framed in terms of TSS, then MS4s should be monitoring TSS. TSS data from annual grab samples will be of limited help, as described in the following paragraph. TSS is important because without that data, it will be difficult to impossible to assess the progress toward achieving the TMDL goals. Since it is difficult to estimate TSS from turbidity, we question whether it is helpful to require turbidity to be the parameter monitored. TSS can be estimated by acoustic Doppler meter backscatter methodology. Evaluation of the Cahaba's Siltation (Habitat Alteration) TMDL progress would be facilitated if the MS4s were required to collect hourly TSS data.

The use of annual grab samples as a water quality monitoring approach is statistically inadequate. The temporal variability of water quality data is typically quite large. There are so many factors that influence water quality parameter values that it can be difficult to obtain an accurate estimate of actual parameter values. Such variability necessitates sampling more often so as to obtain a sufficient sample size to provide reasonable margins of error.

'Power analysis' is an approach that allows an investigator to determine the magnitude of a statistically valid sample size if the following three values are known:

- 1) The magnitude of the difference you would like to be able to detect between two parameter estimates. For this context, we chose 8 mg/l.
- 2) The variance of the variable.
- 3) The desired power of the test. Power is the probability that, if the difference in means is real, it will be detected as statistically "significant" in any one test. Usually, you want power to be relatively high; e.g., around 80% or more.

As an example, we used the EPA's STORET system to examine TSS data from the Cahaba at Highway 52 Bridge from 2012 to 2016. The average TSS value for this data was about 14 mg/l with a variance of about 493 (mg/l). If we want an 80% probability of detecting a change of 8 mg/l (an 8 mg/l change is a reasonable difference we would wish to be able to detect) then a sample size of 61 is needed. Using an annual grab sample regimen, these MS4s would not have enough data to make a valid assessment of the adequacy of their stormwater program for a very, very long time.

Data collection with an automated Sonde will provide valuable water quality information. We hope this monitoring technology will be more widely adopted by the MS4s. We appreciate that ADEM has encouraged some MS4s to adopt this technology. However, Sonde probes are not available for all water quality parameters. For those important parameters that may not be acquired with automated Sonde technology, where grab samples are essential (such as for TSS determination), we recommend collecting and analyzing quarterly or monthly grab samples. Quarterly sampling is a bare minimum to have any statistically reasonable level of accuracy. Even at that compromised sample collection rate, the MS4s may not have a statistically valid assessment of the required parameters for over a decade.

As for the variability of data for other parameters, we have not yet done those analyses. However, TSS information is the basis for the Siltation (Habitat alteration) TMDL for the Cahaba River and therefore should be considered when establishing monitoring requirements for the MS4s to assess whether or not progress is being made toward the goals of that TMDL.

As these draft permits are currently written, ADEM will be unable to determine whether these MS4s are holding steady or making progress toward achieving the Cahaba's Siltation (Habitat Alteration) TMDL goals or even if they are losing ground. More frequent/intensive and more accurate assessments are needed to provide the necessary data to allow sound environmental management decisions to be made in a timely manner.

**Response (9):** Regarding your comment on requiring the use of sondes within the Draft Permit, the use of sondes was an approach proposed by some of the Permittees, not unilaterally required by the Department.

It is the Department's understanding that one entity will be handling the monitoring for these Permittees, and the monitoring will be based on a watershed approach. These Permittees have a history of working closely together and with the surrounding MS4 entities, and there is nothing in this Draft Permit that prohibits or restricts these MS4 entities from working together to address stormwater issues, to include monitoring. Additionally, the Department has been conducting monitoring on both the main stem of the Cahaba River as well as tributaries for the pollutants of concern. Other agencies, such as United States Geological Survey (USGS), also perform sampling with real-time stations on both the main stem of the Cahaba River and its tributaries. The Department reviews the monitoring plans and provides comments when necessary. Again, the public has an opportunity to engage in the development and implementation of the Permittee's SWMPP as detailed in Part II.D.1. of the Draft Permit.

Part III.B of the Draft Permit requires the Permittee to sample total suspended solids (TSS) via grab samples. This Draft Permit provides specific requirements, in addition to monitoring, that shall be addressed by the Permittee's SWMPP, including BMPs selected by the Permittee which are adequate to assist in compliance with the TMDLs. Part II.E. of the Draft Permit requires monitoring to address the BMP effectiveness for TMDL implementation. If existing BMPs are not sufficient, then the BMPs must be revised. Also, Part IV.d. of the Draft Permit requires the Permittee to submit within the Annual Report a monitoring section which discusses the progress and results of the monitoring programs and includes, at a minimum, the following information: status of implementation of monitoring program; monitoring locations; raw data, to include, an explanation/discussion of the data for each component of the monitoring program; an interpretation of the analytical data for determinacy of meeting water quality standards. As with monitoring plans, the Department reviews all annual reports, to include monitoring data, and will continue to review this data individually and on a watershed basis. The Department provides feedback on the data as deemed appropriate.

## **BARD RESPONSE TO COMMENTS**

### **Comment (1): The Draft Permit Improperly Incorporates Guidance Provisions as Mandatory Permit Requirements.**

According to ADEM's own regulations, NPDES permits issued to large or medium MS4s must include the applicable requirements of 40 C.F.R. § 122.42(c). *See* ADEM Admin. Rule 335-6-6-.11. Currently, the proposed Draft Permit incorporates a number of guidance provisions that go beyond what the CWA and Phase I regulations require. BARD acknowledges and commends ADEM for the changes it has made to address this guidance issue in the recent MS4 draft permits it has issued. Nevertheless, guidance provisions classified as mandatory requirements still exist in the Draft Permit. This is not administratively proper, as guidance provisions are not legally binding. Alabama's Administrative Procedure Act ("AAPA") requires a public notice and comment rulemaking before any compliance standard can have the effect of law. *See* Ala. Code §§ 41-22-1, *et seq.* Because ADEM has not complied with the AAPA in this regard, it must: (1) remove all proposed provisions not enumerated in applicable rules and regulations as permit requirements before finalizing the permit; (2) suspend the permit renewal process until the provisions are properly promulgated through notice and comment rulemaking, or (3) revise the Draft Permit such that the provisions are included as recommendations of the agency, but not mandatory permit requirements.

The inclusion of these guidance provisions as permit requirements undercuts the maximum extent practicable ("MEP") standard promulgated by EPA to serve as the lodestar for the entire MS4 program and the creation of individual permits for regulated MS4s. Under both the CWA and EPA's Phase I regulations, a municipality must develop and implement a storm water management program designed to reduce the discharge of pollutants from its respective MS4 to the MEP. *See, e.g.,* 33 U.S.C. § 1342(p)(3)(B)(iii); 40 C.F.R. § 122.26(d)(2)(iv); 55 Fed. Reg. 47989, 47994 (Nov. 16, 1990). Despite the importance of the term, EPA intentionally left MEP undefined in its regulations in order to provide both permitting authorities and regulated MS4s maximum flexibility in implementing MS4 program requirements. While EPA's Phase I regulations provided little insight as to what constitutes MEP, EPA's 1999 rulemaking for small MS4s (known as "Phase II") attempted to describe how MEP should be applied in practice. *See, e.g.* 64 Fed. Reg. 68722, 68732 (December 8, 1999). The Phase II discussion of MEP is very useful in the present context since section 402(p)(3)(B)(iii) of the CWA—the source of the MEP standard—makes no distinction between large, medium, or small MS4s. EPA's reasoning therefore applies equally to all MS4s irrespective of size. *See* 64 Fed. Reg. at 68737 (noting that the minimum control measures required by the Phase II rule for small MS4s are "very similar to a number of the permit requirements for medium and large MS4s under the existing storm water program").

In its Phase II rulemaking, EPA explains that MEP is a site-specific standard that should be applied in a flexible manner, taking into account cost considerations and water quality effects. 64 Fed. Reg. at 68732. The pollutant reduction procedures that represent MEP are likely to differ significantly between MS4s because of each system's unique local hydrologic and geologic concerns and potentially divergent pollutant control strategies. *Id.* at 68754. EPA recommends that permit writers and individual MS4s evaluate the following factors in determining what constitutes MEP for a given regulated governing body: (1) the size of the MS4, (2) the local climate, (3)



implementation schedules, (4) the financial constraints of a given county or municipality, (5) beneficial uses of receiving water, (5) hydrology, (6) geology, (7) the capacity of the county or municipality to perform operation and maintenance, (8) conditions of receiving waters, (9) specific local concerns, and (10) other aspects included in a comprehensive watershed plan. *See* 64 Fed. Reg. at 68732, 68754. EPA instructed that each regulated governing body be afforded the flexibility it needs to determine what BMPs will appropriately fulfill the applicable minimum control measures and satisfy MEP. *See id.*

In stark contrast to these aforementioned principles, ADEM's Draft Permit directly incorporates a number of generic, guidance provisions from various sources—including, but not limited, to EPA's MS4 Program Evaluation Guidance—and imposes them as mandatory requirements for minimum control measures. Despite not being required by the Phase I regulations, these currently proposed permit requirements must be included in the City's Storm Water Management Plan and implemented as a part of its MS4 program. This is directly contrary to EPA's intent to allow counties or municipalities maximum flexibility in developing their programs.

By proposing to include the guidance provisions as mandatory permit requirements, ADEM is effectively eliminating the MEP standard that governs when, how, and under what conditions the County should implement certain guidance provisions or other BMPs to reduce pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. ADEM's incorporation of mandatory guidance provisions handcuffs the County, leaving it very little discretionary authority to implement the MS4 program how it sees fit in compliance with the Phase I regulations.

BARD is also concerned that ADEM and/or other interested stakeholders will treat the City's Draft Permit as a template or baseline for future NPDES permits reissued to Phase I MS4s within the State over the coming years. This concern is seemingly justified given that this Draft Permit is almost identical to ones recently issued by ADEM to the City of Montgomery, City of Mobile and Shelby County. The substantially similar permits for these governing bodies located in geologically and hydrologically diverse areas of the State provide clear evidence that ADEM is not properly adhering to the MEP standard EPA intended to be fundamental to the MS4 permitting process. *See* 64 Fed. Reg. at 68754 (providing that “the pollutant reduction procedures that represent MEP may be different for each MS4 . . . [g]iven the unique local hydrologic and geologic concerns that may exist among the various MS4s and the possible differing pollutant control strategies.”); *see also* 55 Fed. Reg. 47989, 48001, 48038 (providing that “[the Environmental Protection Agency (“EPA”)] notes that each municipal program will be tailored to the conditions in that city” and that the controls utilized by each MS4 “may be different in different permits”). It is a basic premise of EPA's rulemaking that the significantly different circumstances characterizing each MS4 disallows generic permit conditions which can be applied interchangeably to each system. Instead, each MS4 must be given the flexibility necessary to evaluate what BMPs are appropriate to satisfy the applicable minimum control measures under its unique circumstances. *Id.* At 68754. ADEM must reevaluate this Draft Permit to account for any relevant unique circumstances affecting the City and its MS4. And, BARD asks that ADEM remain cognizant of this principle as it drafts new permits for other MS4s in the future.

**Response (1):** Your comment does not identify portions of the Draft Permit you feel incorporate “guidance provisions classified as mandatory requirements.” The intent of the Draft Permit is to require the Permittee to implement, maintain and enforce a comprehensive stormwater management program which involves using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate 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. The Draft Permit language and provisions have been agreed to by the Permittee instead of being unilaterally required as suggested by your comment.

The Department agrees that the permitted entity should be granted flexibility to determine what BMPs are appropriate to fulfill the applicable minimum control measures and satisfy the MEP standard. For this reason, the specific BMPs the Permittee utilizes to meet Permit requirements will be determined by the Permittee and laid out in the SWMPP, which will be reviewed by the Department. So, while the overarching Draft Permit requirements may be similar or identical to those found in other Phase I permits, the BMPs utilized to meet these requirements will likely vary, giving the Permittee the flexibility in implementation. The Department believes that the terms of this Draft Permit meet the statutory and regulatory requirements and are achievable by the Permittee.

**Comment (2): The Draft Permit Disregards the Alabama State Legislature’s Instructions as to the Scope of MS4 Programs.**

The Phase I regulations are an unfunded federal mandate. In revising Chapter 11-89C of the Alabama Code during the last legislative session, the Alabama Legislature recently clarified what ADEM may require of counties and municipalities to comply with this unfunded mandate. As explained in detail below, the current Draft Permit conflicts with the tenets of these statutory provisions.

As background, the Alabama Legislature first voiced its growing concern in 1997 regarding the significant costs municipalities are required to incur simply to comply with the Phase I regulations. In a joint resolution, lawmakers made clear that municipal MS4 programs need to be limited to that which is “absolutely required to satisfy the relevant federal laws and regulations.” *See* Ala. Act 97-931 (H.J.R. 144) (1997). Under the recently amended Chapter 11-89C of the Alabama Code, the Legislature explicitly provides that any and all rules and regulations ADEM adopts related to storm water discharges into MS4s “shall be limited to include only those rules, regulations, and/or aspects that are absolutely required to satisfy the storm water laws.” *See* Ala. Code §11-89C-9(a); *see also* Ala. Code § 11-89C-1(e) (instructing that the “substantive scope” “of such local programs [is to be limited] to include only those rules, regulations, and/or aspects that are absolutely required to satisfy the Clean Water Act, as specifically set out in the Code of Federal Regulations.”). These prohibitions were collectively intended to limit both the *jurisdictional and substantive scope* of the local MS4 programs to matters absolutely required by the relevant federal laws and regulations. *Id.* By doing so, the Alabama Legislature ensured that the costs associated with MS4 programs “would be restrained by the strict limitations on the scope of such programs to that scope absolutely required by the relevant federal laws and regulations.” Ala. Act 97-931 (H.J.R. 144) (1997). By incorporating requirements beyond those required by the Phase I regulations, ADEM is unlawfully disregarding the statutory limitations set forth in

Section 11-89C-9(a).

Before finalizing the Draft Permit (or any future Phase I MS4 permit), ADEM must determine that incorporating numerous requirements beyond those mandated by the Phase I regulations is consistent with the recently revised provisions of Chapter 11-89C of the Alabama Code.

**Response (2):** The Department sees no conflict between the Draft Permit requirements and Ala. Code Chapter 11-89C. In addition, your comment does not indicate which Draft Permit requirements you feel go “beyond those required by the Phase I regulations.” The intent of the Draft Permit is to require the Permittee to implement, maintain and enforce a comprehensive stormwater management program which involves using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate 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. The stormwater program elements and requirements (Part II.B of the Draft Permit) that must be addressed by the Permittee are those that are listed in 40 CFR 122.26(d)(2)(iv). The specific BMPs the Permittee utilizes to meet each of these elements will be determined by the Permittee and laid out in the SWMPP, which will be reviewed by the Department.

**Comment (3): Citations to Handbooks Must Reference the Specific Publication Date and/or Edition**

ADEM has incorporated by reference the Low Impact Development (“LID”)/green infrastructure (“GI”) handbook and the Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas published by the Alabama Soil and Water Conservation Committee without specifying the publication date, version, edition, etc., of these materials. This is improper as a matter of administrative law. It is a basic principle of notice and comment rulemaking that the public must be provided a meaningful chance to review, analyze, and offer comments on the rules and regulations that administrative agencies propose as laws. *See* Ala. Code § 41-22-5(a) (“Prior to the adoption, amendment, or repeal of any rule, the agency shall: . . . [provide] a statement of either the terms or substance of the intended action or a description of the subjects and issues involved. . . [and] [a]fford all interested persons reasonable opportunity to submit data, views, or arguments, orally or in writing”). For example, the Alabama Code authorizes ADEM to “adopt, by reference in its rules and without publishing the adopted matter in full, all or any part of a code, standard or regulation which has been adopted by . . . a generally recognized organization or association approved by the joint committee administrative regulation review.” *See* Code § 41-22-9. However, such references must “fully identify the adopted matter *by date and otherwise*” and “copies of the adopted matter” must be made available “*for inspection.*” *Id.* (emphasis added).

While commenters are able to assess and offer comments to standards set forth in the current versions of these handbooks (assuming it is these versions ADEM intends to reference), they have no way to consider what a future version may prescribe. This means that the standards in the Draft Permit could substantively change without an additional public comment period, effectively circumventing the AAPA. ADEM must therefore specify the precise versions or editions of these handbooks it intends to incorporate by reference.

**Response (3):** To clarify, the following definition has been added to Part V.Y: *Alabama Handbook* means the September 2014 edition of the Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management on Constructions Sites and Urban Areas, Alabama Soil and Water Conservation Committee (ASWCC) published at the time permit is effective. References to the Low Impact Development (“LID”)/green infrastructure (“GI”) handbook are included for informational purposes only, so there is no need to specify the publication date.

**Comment (4): Part II. Subparts A.3.b. and B.5.a.3. Consideration of LID/GI**

A conflict exists between these two Draft Permit provisions. Section II.A.3.b. provides that LID/GI *shall* be considered; whereas, Section II.B.5.a.3. of the Draft Permit requires the City to “[e]ncourage” landowners and developers to implement LID/GI when doing so is pragmatic and economically feasible. The use of LID/GI cannot be mandated in the Draft Permit because the use of such control measures is not enumerated in any federal regulation, or accompanying text, that is applicable to MS4s. *See generally* 40 C.F.R. § 122.26; 55 Fed. Reg. 47989-48091; 64 Fed. Reg. 68721-68851. Thus, while it is acceptable for ADEM to encourage permittees to consider the use of LID/GI, it is improper (for the reasons discussed in the guidance provisions general comments set out above) for ADEM to mandate use or consideration of LID/GI since there is no requirement to do so in the Phase I regulations.

**Response (4):** The Draft Permit states in Part II.A.3.b, LID/GI shall be considered where feasible. Part II.B.5.a.3 of the Draft Permit states to encourage landowners and developers to incorporate the use of low impact development (LID/GI) where feasible. In neither instance is the Department mandating the use of LID/GI, only that it be **considered** and **encouraged** where feasible.

**Comment (5): Part II., Subpart B.4. Construction Site Stormwater Runoff Control.**

ADEM should clarify that the City is permitted to utilize and incorporate various components of ADEM’s existing construction storm water program to satisfy the requirements of this subpart. Although EPA has informally interpreted the Phase I regulations as prohibiting a medium or large MS4 from relying solely on ADEM’s program (though there is no explicit statement in the Phase I regulations to this effect), there is no reason that a medium or large MS4 cannot incorporate *parts* of ADEM’s program to meet this requirement. Specifically, as EPA has pointed out:

The [Phase I] regulations contemplate a degree of flexibility in allowing Individual Phase I MS4s to design a construction program appropriate for local conditions, provided that the minimum components . . . are included and the local government is able to control discharges from construction sites to the maximum extent practicable. Further, local governments may maximize efficiencies with existing state-level programs. For example, a local government may adopt local requirements that mirror or *incorporate* requirements from the state construction general permit, or it may coordinate its enforcement activities with state enforcement of the state construction general permit.

See March 20, 2008 Letter from Mr. James D. Giattina, Director of Water Management Division, EPA Region IV, to Mr. Steve Jenkins, Chief of Field Operations, Water Division, ADEM (emphasis added). A City could, for example, rely on ADEM's review and approval of Erosion and Sediment Control plans for sites that require ADEM review (i.e. priority sites). This would avoid conflicting opinions (City vs. ADEM) on Erosion and Sediment Control plan design, as well as preventing the City from having to "reinvent the wheel." Moreover, Chapter 11-89C of the Alabama Code provides that any entity in compliance with an ADEM-issued NPDES permit is deemed compliant with any local ordinance issued by the City pursuant to its MS4 obligations, meaning the City could not lawfully require a developer to revise its plans at ADEM-regulated construction sites. Requiring the City to review these plans therefore amounts to unnecessary double regulation and undermines the efficient use of governmental resources without any compelling justification.

Similarly, construction sites that disturb one acre or greater are currently subject to ADEM's general NPDES permit for qualifying construction sites. This general permit requires frequent, periodic inspections. The Draft Permit requires the City to inspect these sites as well. Thus, by requiring the City to implement an inspection program, a third entity is tasked with inspecting such sites (i.e., NPDES Construction Permittee, MS4, and ADEM). This is a waste of resources. The City's role should be limited to quality control, with periodic inspection left to its discretion. The Draft Permit, as presently drafted, requires the City to waste resources in a duplication of ADEM's responsibilities.

Finally, the Draft Permit would require the City to implement an enforcement response plan. This is another needless duplication of ADEM's responsibilities. The City should be allowed to utilize ADEM's existing system for its NPDES construction storm water program and seek enforcement only on those sites that are non-compliant and that ADEM is not addressing. The Draft Permit does not clearly reference that the City may rely upon ADEM and its construction storm water program for the enforcement of all violations at sites regulated by ADEM's general permit for qualifying construction sites. Indeed, revised Chapter 11-89C makes it mandatory for the City to rely upon ADEM for this enforcement to the maximum extent permitted by law. This needs to be more clearly articulated in the text of the Draft Permit.

**Response (5):** Again, the Department sees no conflict between the Draft Permit and Ala. Code Chapter 11-89C, as the Draft Permit allows the Permittee to rely upon ADEM to the extent allowed. This Draft Permit was developed to meet the requirements set forth in 40 CFR 122.26(d)(2)(iv)(D), and with the consent of the Permittee. If the Department has taken and is proceeding with an enforcement action, then Ala. Code § 11-89C-12 prohibits the Permittee from pursuing an enforcement action for the same alleged violation; however, under Section 11-89C-12(b), the Permittee may pursue enforcement actions for continued or continuing violations.

**Comment (6): Part II., Subpart B.5. Post-Construction Storm Water Management in New Development and Re-Development.**

BARD is particularly concerned with a number of requirements set out in this subpart. A discussion of each is set out below.

*a. The proposed regulation of pre- and post-construction hydrology is improper*

How is the City to interpret and implement Section II.B.5.a.2, which requires “preconstruction hydrology” to mimic “post-construction hydrology”? Do these terms refer to flow, volume, timing, or all of these? Should it refer to any of the above or anything other than the discharge of a “pollutant” as it is defined under the CWA, it is outside the scope of the MS4 program and cannot be enforced by ADEM and/or EPA under the MS4 program. Neither the CWA nor the CFR use the term “hydrology,” not even in guidance. In fact, the concept of regulating hydrology through MS4 permits was arguably developed by EPA as a means to unlawfully incorporate section 438 of the Energy Independence and Security Act (“EISA”) into CWA section 402(p)(3)(B). *See generally In Re Joint Base Lewis-McChord Municipal Separate Storm Sewer System*, NPDES Appeal No. 13-09 (EPA App. Bd. 2009).

In December 2007, EISA section 438 established storm water design requirements for federal development and redevelopment projects, stating that such projects over 5,000 square feet must “maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.” *See* 42 U.S.C. § 17094. In addressing the argument that EPA could not incorporate this provision into a MS4 permit under the auspices of CWA section 402(p)(3)(B), EPA stated:

EPA’s Permit does not purport to implement Section 438 of EISA, 42 U.S.C. § 17094. Further, EPA disagrees that the CWA and EISA § 438 are mutually exclusive unless Congress directs otherwise. Postconstruction performance standards for development sites are established by EPA in Permit Part II.B.5 pursuant to CWA Section 402(p)(3). EPA’s [Fact Sheet] at page 32 explains that these provisions are intended to “...*protect water quality in Puget Sound and its tributaries to the maximum extent practicable, [such that] all new development and redevelopment sites within the surrounding watersheds must be planned, designed, and constructed in a manner that minimizes the negative impact of urbanization by mimicking natural hydrology.*”

U.S. Dep’t of the Army, *Petition for Review of NPDES Permit for Joint Base Lewis-McChord Municipal Separate Storm Sewer System and Request for Oral Argument*, 9 (2009) (quoting EPA, *Response to Comments*, pp. 28-29, response 50) (emphasis in original).

Despite the fact that EPA’s response appears disingenuous in light of the similarity in language between the provisions, EPA asserts that the CWA and EISA are not mutually exclusive “unless Congress directs otherwise.” This rationale is incorrect because agencies may only act on authority expressly granted by Congress, not on authority inferred from Congressional silence. *See Va. Dept. of Transp. v. EPA*, 2013 WL 5374, \*3 (E.D. Va. 2013) (“[t]he question is whether the statute grants the agency the authority it is claiming, not whether the statute explicitly withholds that authority”). Hence, ADEM, by proxy, should not adopt hydrology requirements from EISA section 438 and enforce them as mandatory extensions of CWA section 402(p)(3)(B).

Even if EPA and/or ADEM are not seeking to incorporate EISA section 438, hydrology regulations are impermissible because EPA may not regulate storm water flow as a surrogate pollutant. *See Va. Dep’t of Transp.*, 2013 WL 53741, at \*4-5 (holding that EPA may not regulate storm water

flow as a surrogate pollutant).<sup>7</sup> By EPA's own admission, this is precisely what it intends when it imposes hydrology regulations. *See* U.S. Dep't of the Army, Petition for Review of NPDES Permit for Joint Base Lewis-McChord Municipal Separate Storm Sewer System and Request for Oral Argument, 9 (2009) (EPA stating that hydrology regulations are intended to "minimize[] the negative impact of urbanization") (quoting EPA, Response to Comments, pp. 28-29, response 50); *see also* 64 Fed. Reg. at 68760 (in reference to minimizing impervious surfaces (i.e., urbanization) "[t]his strategy can slow the rate of runoff, reduce runoff volumes, attenuate peak flows, and encourage filtering and infiltration of storm water").

If it is not ADEM's intention by and through this provision to regulate storm water flow where a discharge of pollution does not actually occur, the Draft Permit must be redrafted with clear and justiciable terms which explain the purpose of the hydrology regulations under Section II.B.5.a.2.

**Response (6):** Again, the intent of the Draft Permit is to require the Permittee to implement, maintain and enforce a comprehensive stormwater management program which involves using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate 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(d)(2)(iv)(A)(2). 40 CFR 122.26(d)(2)(iv)(A)(2) is clear that the Permittee is responsible for controlling the **discharge of pollutants** in stormwater runoff from new developments and significant redevelopments. The Department notes that flow is not a pollutant.

Regarding hydrology, the Department believes that the definition provides the Permittee with a clear understanding of what must be performed to comply with Part II.5 of the Draft Permit. Additionally, the definition used in this Draft Permit is consistent with other recently-issued MS4 Phase I Permits.

**Comment (7):** *ADEM should not use the MS4 permitting process as a means to regulate land use*

In some form, requiring minimization of impervious surfaces, preservation of ecologically sensitive areas, the establishment of vegetative buffers, protection of vegetation and soil, and/or regulation of hydrology all amount to impermissible attempts to regulate land use by way of federal mandate. Federal authority under the CWA does not go so far as to usurp the "quintessential state and local power" found in the "[r]egulation of land use." *Rapanos v. U.S.*, 547 U.S. 715, 738-39 (2006) ("We ordinarily expect a 'clear and manifest' statement from Congress to authorize an unprecedented intrusion into traditional state authority. The phrase 'the waters of the United States' hardly qualifies.") (Scalia, J. plurality) (citations omitted); *see also Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 174 (2001) (*SWANCC*) (rejecting a similar CWA application because of "significant constitutional questions raised" by impingement of the States' traditional and primary power over land and water use"). The decisions in both *SWANCC* and *Rapanos* turned on how broad the term "waters of the United States" should be interpreted and both cases reasoned that Congress did not authorize "*de facto*" federal regulation of land use through the CWA. *See Rapanos*, 547 U.S. at 738 ("[t]he extensive federal jurisdiction urged by the Government would authorize the Corps to function as a *de facto* regulator of immense

stretches of intrastate land—an authority the agency has shown its willingness to exercise with the scope of discretion that would befit a local zoning board”).

In the present case, ADEM, through the MS4 permitting process, has imposed postconstruction BMPs in the Draft Permit which would allow it to function as a *de facto* regulator of immense stretches of intrastate land with the scope of discretion that would befit a local zoning board. For example, by placing limitations on impervious surfaces and hydrology, and imposing water retention mandates, ADEM has effectively paralyzed opportunities for meaningful, industrial development in the City. Because the CWA only authorizes regulations narrowly tailored to reduce the discharge of pollutants, ADEM authority under section 402(p)(3)(B) should be so limited here.

**Response (7):** The post-construction BMP requirements in the Draft Permit do not operate to regulate land use. The intent of the Draft Permit is to require the Permittee to implement, maintain and enforce a comprehensive stormwater management program which involves using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate 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(d)(2)(iv)(A)(2). 40 CFR 122.26(d)(2)(iv)(A)(2) is clear that the Permittee is responsible for controlling the discharge of pollutants in stormwater runoff from new developments and significant redevelopments. Regarding the controls required to reduce the discharge of pollutants from new developments and significant redevelopment, 40 CFR 122.26(d)(2)(iv) states, in part, that the Permittee’s program must include:

A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.

The intent of Part II.B.5 of the Draft Permit is to require controls to reduce the **discharge of pollutants** and to ensure that the Permittee retains flexibility in determining the appropriate BMPs utilized to meet the required MEP standard. The Department believes that the Draft Permit is clear in this intent and no changes were made based on this comment.

**Comment (8): Other Concerns**

BARD questions EPA’s authority to require the submittal of an as-built certification for post-construction BMPs under Section II.B.5.a.6 of the Draft Permit. Regardless of either EPA or ADEM’s legal authority, BARD questions the prudence of creating what will almost assuredly be a costly and onerous requirement for both the developer as well as the City, especially without further clarification regarding the nature of the certification. Is the developer required to certify that the BMPs were built as shown on the plans, that they are effective, or both?

Finally, Section II.5.a.9. of the Draft Permit requires either the City or another entity to perform long-term operation and maintenance of post-construction BMPs. This requirement is beyond the scope of both EPA and ADEM’s authority. Neither regulatory body possesses the authority to



require Alabama municipalities or counties to take over such responsibilities, or to take any other affirmative actions. This requirement must therefore be removed.

**Response (8):** The requirements in Part II.B.5.a.6 to submit “as-built” certifications along with the inspections of post-construction BMPs will aid in the assurance that the BMPs were installed and are functioning as planned. Part II.B.5.a.9 language has been agreed to by the Permittee, and the Department believes it is achievable for the Permittee. In addition, this language is consistent with recently issued Phase I MS4 permits, and the recently issued Phase II MS4 General Permit (ALR040000).

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**Ordinance 2018-11**

**STORMWATER MANAGEMENT AUTHORITY, INC.  
EROSION AND SEDIMENTATION CONTROL ORDINANCE**

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**STORM WATER MANAGEMENT  
EROSION AND SEDIMENTATION CONTROL  
ORDINANCE**

**RECITALS**

**WHEREAS**, the sedimentation of streams, lakes and other waters of this state constitutes a major pollution problem; and

**WHEREAS** sedimentation occurs from the erosion or depositing of soil and other materials into the waters, and control of erosion and sedimentation is deemed vital to the public interest and is necessary to the public health and welfare, and expenditures of funds for an erosion and sedimentation control program shall be deemed to benefit the public health and welfare; and

**WHEREAS**, the purpose of this ordinance is to provide for the creation, administration, control and enforcement of a program to reduce erosion and sedimentation problems pursuant to the National Pollutant Discharge Elimination System ("NPDES") permit ALS000019 from Alabama Department of Environmental Management ("ADEM") for stormwater discharges from the Municipal Separate Storm Sewer System of the City of Irondale ("MS4"), which will permit the development in the City of Irondale, ("City") to continue with the least detrimental effects from pollution by sedimentation; and

**WHEREAS**, ADEM, pursuant to the authority delegated to it under the Clean Water Act, 33 U.S.C. Section 1251, *et seq.*, has required City to obtain an NPDES permit for stormwater discharges from the MS4, effective March 1, 1995, and, therefore, City is subject to the federal stormwater laws and regulations contained in 33 U.S.C. ¶ 1342 (P) and 40 C.F.R. ¶ 122.26, and is required to adopt a local erosion control ordinance. Act No. 95-775 of the Alabama State Legislature (Code of Alabama 1975, § 11-89C 1-14) and other provisions of the Code of Alabama 1975 grant the authority to adopt such ordinances to the governing bodies of all Class 1 municipalities within the State of Alabama, to the governing bodies of counties in which Class 1 municipalities are located and to the governing bodies of all other municipalities located within such counties, and where any such other municipality is also located partially within an adjoining county, then the governing body of such adjoining county and which governing bodies are specifically designated in 40 C.F.R. part 122, Appendices F, G, H or I or by ADEM pursuant to the authority delegated to it under the Clean Water Act, 33 U.S.C. Section 1251, *et seq.*; and

**WHEREAS**, it is the purpose of this ordinance to protect and maintain the environment of the City and the short-term and long-term public health, safety and general welfare of the citizens of the City by controlling discharges of pollutants to the City's MS4, thereby, maintaining and improving the quality of the community waters into which the stormwater outfalls flow, including, without limitation, the lakes, streams, ponds, wetlands, sinkholes, and groundwater of the City; and

**WHEREAS**, this ordinance controls the discharge of certain non-storm water to the MS4 from land on which land-disturbing activities are conducted, to the maximum extent practicable, and provides enforcement procedures and penalties to ensure compliance with such controls; and



**WHEREAS**, it is further the purpose of this ordinance to enable the City to comply with the NPDES permit and applicable regulations (40 C.F.R. ¶ 122.26) for stormwater discharges; and

**WHEREAS**, the objectives of this ordinance are to:

- (a) control (i) the contribution of pollutants to the MS4 by stormwater discharges associated with land-disturbing activities and (ii) the quality of stormwater discharged to the MS4 from sites of land-disturbing activity;
- (b) prohibit illicit discharges to the MS4;
- (c) control the discharge to the MS4 of any spills, dumping or disposal of materials other than stormwater from sites of land-disturbing activity; and
- (d) carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and noncompliance with land-disturbing activity permits (singular, "Permit" and plural, "Permits").

**NOW, THEREFORE**, be it ordained by the City Council of the City of Irondale ("City Council") as follows:

## **Article 1 DEFINITIONS**

### **Section 1.01 Definitions.**

For the purposes of this ordinance, the following words and terms shall have the meaning assigned to them in this section.

**Accidental Discharge** - a discharge prohibited by this Article into the MS4 or community water which occurs by chance and without planning or consideration before the occurrence.

**Adverse Impact** - any deleterious effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property or to biological productivity, diversity or stability, or which would unreasonably interfere with the enjoyment of life or property.

**Agriculture** - activities are undertaken on land for the production of plants, crops, and animals which are useful to man.

**Alabama Department of Environmental Management** (herein abbreviated as "ADEM") - the State of Alabama regulatory agency, created under Code of Alabama 1975, § 22-22A-1, et seq., responsible for administering and enforcing the storm water laws of the United States of America and the State of Alabama.

**Applicant** - any person, firm, corporation or governmental agency who executes the necessary forms to procure approval of Best Management Practices Plans from the Official.

**Best Management Practices** (herein abbreviated as "BMP") - activities, prohibitions of practices, maintenance procedures and management practices designed to prevent or reduce the pollution of waters to the MS4. Best Management Practices also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage and construction sites.

**Best Management Practices Plan** (herein abbreviated as "BMP Plan") - a set of drawings and/or other documents submitted by a person as a prerequisite to obtaining a Permit, which contains all of the information and specifications about BMP.

**Clean Water Act** (herein abbreviated as "CWA") - the federal act (33 U.S.C. § 1251 through § 1387) which was formerly referred to as the Federal Water Pollution Control Act and Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 6-483 and Public Law 97-117, 33 U.S.C. § 1251-1387.

**Clearing** - the removal of trees and brush from the land, not including the ordinary mowing of grass or the maintenance of previously cleared areas.

**Community Waters** - any or all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetlands, wells and other bodies of natural or artificial surface or subsurface water into which the MS4 outfalls flow.

**Contour** - a line of equal elevation above a specified datum, usually, mean sea level.

**Contour Line** - a line joining points having or representing equal elevations.

**Discharge** - the passing of water or other liquid through an opening or along a pipe, conduit or channel; the rate of flow of water, silt, or other mobile substance which emerges from a pipe, conduit or channel, usually expressed as cubic feet per second, gallons per minute or million gallons per day.

**Drainage** - the removal of surface water from a given area either by gravity or by pumping; commonly applied to surface water and groundwater.

**Drainage Area** - that area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridge line; the area of a drainage basin or watershed, expressed in acres, square miles or another unit of area.

**Engineer** - a person currently licensed by the Alabama State Board of Registration for Professional Engineers and Land Surveyors to provide engineering services.

**Erosion** - wearing away of lands by running water.

**Erosion Control** - the application of measures to reduce erosion of land surfaces.

**Grading** - any act by which soil is cleared, stripped, stockpiled, excavated, scarified or filled, or any combination thereof.

**Illicit Connection** - any man-made conveyance connecting an illicit discharge directly to the MS4.

**Illicit Discharge** - any discharge that is not composed entirely of storm water, except discharges pursuant to an NPDES permit (other than NPDES Permit ALS000019) and discharges which are specifically excepted from this ordinance.

**Minor Extension** - an addition to an existing utility pipeline or another utility line in which the land disturbed consists of fewer than 7,500 linear feet.

**Municipal Separate Storm Sewer** (herein abbreviated as "MS3") - a conveyance or conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels and storm drains), owned or operated by a city, town or county or another public body (created by, or pursuant to, State law) having jurisdiction over stormwater.

**Municipal Separate Storm Sewer System** (herein abbreviated as "MS4") - a system of municipal separate storm sewers, as defined hereinbefore.

**NPDES** - National Pollutant Discharge Elimination System.

**Outfall** - a point source (meaning any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged, but not including return flows from irrigated agriculture or agricultural water runoff) at the point of a discharge to waters of the United States of America.

**Permit** - any permit issued pursuant to this ordinance.

**Permittee** - a person, party, government entity and all others who receive a permit to discharge under the NPDES.

**Pollutant** - includes, but is not limited to, the pollutants specified in Code of Alabama 1975, § 22-22-1(b) (3) and any other effluent characteristics specified in a Permit.

**Pollutant Loading** - the amount of a pollutant entering the MS4.

**Qualified Credentialed Professional** - a Certified Professional in Erosion and Sediment Control ("CPESC") as determined by the Soil and Water Conservation Society ("SWCS") or the International Erosion Control Association ("IECA"). Other

registered or certified professionals such as a professional engineer or a landscape architect, registered land surveyor, registered architect, registered geologist, registered forester, Registered Environmental Manager as determined by the National Registry of Environmental Professionals ("NREP"), Certified Professional Soil Scientist ("CPSS") as determined by the American Registry of Certified Professionals in Agronomy, Crops and Soils ("ARCPACS"), who can document the necessary education, training, and professional certification, registration, or credentials acceptable to the Official and can demonstrate proven experience in the field of erosion and sediment control shall be considered a qualified credentialed professional. The qualified credentialed professional must be in good standing with the authority granting the registration. The qualified credentialed professional must be familiar, and have expertise, with current industry standards for erosion and sediment controls and must be able to inspect and assure that nonstructural BMPs or other pollution control devices (silt fences, erosion control fabric, rock check devices, etc.) and erosion control efforts, such as grading, mulching, seeding and growth management, or management strategies have been properly implemented and regularly maintained according to good engineering practices and the requirements of this permit. A professional engineer ("PE") registered in the state of Alabama must certify the design and construction of structural practices such as spill prevention control and counter measures ("SPCC") plan containment structures, dam construction, etc.

**Sediment** - solid material settled from suspension in a liquid that has been transported and deposited from its site of origin by air, water, ice or gravity as a product of erosion and has come to rest on the earth's surface either above or below a water surface, usually, inorganic or organic particles originating from weathering, chemical precipitation, or biological activity.

**Silviculture** - the care and cultivation of forest trees, including site preparation, planting, pruning, thinning and harvesting.

**Site** - any tract, lot or parcel of land or combination of contiguous tracts, lots or parcels of land which are in one ownership, and any combination of tracts, lots and parcels which are contiguous, are owned by two or more parties and are to be developed as a unit, subdivision or project.

**Stabilization** - the prevention of soil movement by any of various vegetative and/or structural means.

- Storm Water** - the excess water running off from the surface of a drainage area during and immediately after a period of rain. It is that portion of the rainfall and resulting surface flow that is in excess of that which can be absorbed through the infiltration capacity of the surface of the basin.
- Storm Water Management** - the incorporation of a variety of activities and equipment into a plan to address concerns associated with Storm Water to prevent pollution, improving water quality, keeping pollutants out of the runoff, and the implementation of Best Management Practices.
- Storm Water Management Program** (herein referred to as "the Management Program" or "the Program") - a program which covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and, where necessary, intergovernmental coordination, to reduce the discharge of pollutants, to the maximum extent practicable, using management practices control techniques and system design and engineering methods and such other provisions which are appropriate.
- Storm Water Permit** - a permit which grants permission to the holder to discharge stormwater to the MS4 under the NPDES.
- Stream** - a course of running water usually flowing in a particular direction in a definite channel and discharging into some other course of running water or body of water.
- Structural Controls** - measures incorporated into existing Storm Water drainage systems or newly constructed systems to prevent or minimize the discharge of pollutants for maintaining and/or improving water quantity and quality management; quantitative control by a system of vegetative and structural measures that control the increased volume and rate of surface runoff caused by man-made changes to the land; qualitative control by a system of vegetative, structural and other measures that reduce or eliminate pollutants that might otherwise be carried by surface runoff.
- Turbidity** - a condition in water or wastewater caused by the presence of suspended matter, resulting in the scattering and absorption of light rays. A measure of fine suspended matter in liquids.
- Utility** - a business or service which is engaged in regularly supplying the public with some commodity or service which is of public consequence and need, such as electricity, gas, water, telephone service, and telegraph service.
- Variance** - the modification of the minimum stormwater management requirements in situations in which exceptional circumstances, applicable to the site with respect to which the variance is requested, exist so that strict adherence to the provisions of this ordinance would result in unnecessary hardship and the granting of such modification would not result in a condition contrary to the intent of this ordinance.



**Article 2**  
**ADMINISTRATION**

**Section 2.01**

The municipal engineer for the City, the municipal building inspections official or employee who is a qualified credentialed professional, such other municipal official or municipal employee who has had sufficient experience dealing with BMP design to enable them to enforce the provisions of this ordinance, an individual or agency contracted to provide such service, shall be responsible, on behalf of the City ("Official"), to enforce the provisions of this ordinance (whenever the word "Official" is used in this ordinance, it shall include the authorized agent of the Official).

**Article 3**  
**APPLICATION AND FEES**

**Section 3.01 Application.**

- (a) Before the commencement of any land-disturbing activity that is not exempted from obtaining a Permit under this ordinance, the owner of the land on which such activity shall be conducted, or his duly authorized agent, must file with the City of Irondale Building Inspections Office an application for the approval of the owner's BMP Plan. The Official must either approve or disapprove the BMP Plan within fourteen (14) days of the day it is filed with the Official. If the BMP Plan is disapproved, the Official must inform the Applicant, in writing, of the reasons for its disapproval. If the Applicant, on one or more occasions, revises the BMP Plan or submits to the Official additional documents or information in connection with the BMP Plan, the Official must make a written response to the Applicant with respect to whether such revised BMP Plan and/or additional documents and information have been approved or disapproved by the Official. All such additional responses must be made by the Official to the Applicant within fourteen (14) days of the day such revised BMP Plan, or additional documents or information are submitted to the Official. The land-disturbing activity may not be commenced before the issuance of the Permit by the Official. The issuance of the Permit shall not excuse the owner from the need to obtain other required state and local permits or licenses.
- (b) The minimum standards for the issuance of a Permit must meet the requirements of this ordinance.
- (c) Facilities that are covered under an ADEM NPDES permit for stormwater discharge associated with construction activities ("ADEM NPDES permit") shall submit an ADEM Notice of Registration (NOR) with their application. The Notice of Intent (NOI) may be provided until the NOR is received from ADEM. Copies of all monitoring data and reports shall be submitted to the City in the same manner as they are submitted to ADEM and in the frequency specified by the City.

**Section 3.02 Permit Application Fee.**

Each application for the issuance of a Permit shall include all erosion and sediment control, vegetation and drainage and shall be based on the engineer or contractor's estimate of these items. The applicant must submit Best Management Practice Plans with the application and fee to the City of Irondale Building Official. Each application for the issuance of a Clearing and/or Earthwork permit shall be accompanied by a non-refundable fee associated with the Building Permit application as follows:

\$1,000 or less	\$40.00
\$1,001 to \$10,000	\$80.00
\$10,001 to \$25,000	\$120.00
\$25,001 to \$50,000	\$200.00
\$50,001 to 100,000	\$250.00
\$100,001 to 200,000	\$500.00
\$200,000 & over	Plus 0.05 percent

In addition to the Clearing and/or Earthwork permit, a surety bond or a cash bond, with the City of Irondale having the right to determine which type of security shall be furnished. A surety bond or cash bond (a surety bond and a cash bond shall be herein collectively referred to as a "security") shall be furnished to the City of Irondale in accordance with the following provisions:

- The City Official shall require a surety bond or a cash bond in such amount as specified herein to assure that the work, if not completed or if not in accordance with the permitted plans and specifications, will be corrected to eliminate hazardous conditions, erosion and/or drainage problems. In lieu of a surety bond required by the City of Irondale, the owner may file a cash bond with the City of Irondale in an amount equal to that which would be required in the surety bond.
- The surety shall contain, or have attached to it as an exhibit, a legal description of the site. The security shall remain in effect for such reasonable period as may be required by the City Official.
- The security for clearing operations only shall be for \$1000.00 per acre for each acre, or fraction of an acre, disturbed or affected by such operations.
- The security for earthwork or clearing and earthwork operations shall be for \$3,000.00 per acre for each acre, or fraction of an acre, disturbed or affected by such operations.
- Security equal to double the amounts required above herein shall be required where clearing or earthwork is performed in areas designated as floodways, floodplains, or areas susceptible to landslides.
- Each letter of credit must be issued by a bank which has its principal office in Jefferson County, Alabama.
- Each letter of credit must be issued by a bank which is reasonably satisfactory to the City of Irondale, and each surety bond must be issued by a surety company which is qualified to do business in Alabama and which is otherwise reasonably satisfactory to the City of Irondale.

Any person, contractors, or sub-contractors who commences clearing and/or earthwork before obtaining the necessary permits as listed above, shall be subject to a \$100.00 penalty plus a double permit fee.

To help defray the City's cost of processing and reviewing the application and the inspections associated with the application. Sites that are required to have Post-Construction controls as stated in Ordinance # (2018-12) will have an additional fee of \$1500 to defray the City's cost of processing and reviewing the structure's design and the associated inspection and maintenance BMPs. The applicant must submit three sets of its BMP Plan with its application and fee to the Official.

**Section 3.03 Post Construction Annual Issuance Fee.**

An annual issuance fee of \$100.00 will be paid to the City to defray the administrative cost of inspecting Post-Construction controls and maintaining inspection records.

**Section 3.04 Data Required on the Application for a Permit.**

(a) All applications for a Permit must include the following information:

- (1) name of Applicant;
- (2) the telephone number of applicants, telecopier number, if any, of the applicant, and e-mail address, if any, of Applicant;
- (3) address where the Applicant or another person who can furnish information about the land-disturbing activity can be reached;
- (4) name, address, telephone number, telecopier number, if any, and e-mail address, if any, of the owner of the project, the owner of the property on which the project is to be located and the ground lessee of the property, if any, on which the land-disturbing activity is to be conducted if the applicant is not the owner of the project and such property;
- (5) legal description and address, if any, of the property upon which the land-disturbing activity is to be conducted;
- (6) names, addresses, telephone numbers, telecopier numbers, if any, and e-mail addresses, if any, of all contractors and subcontractors who shall implement any BMP Plan; provided, however, that if the contractor and the subcontractors have not been selected when the application for a permit is filed, the Applicant shall furnish such information to the Official within five (5) days of the day or days on which the contractor and/or subcontractors are selected;
- (7) name, address, telephone number, telecopier number, if any, and e-mail address, if any, of the qualified credentialed professional who has approved the BMP Plan application (this is required for all land-disturbing activities except those related to the construction of individual single-family residences);
- (8) each application for a Permit must be accompanied by a map or a plot of the land on which the land-disturbing activity will be conducted and any other information that is required under the



provisions of Article 5.

- (b) The detail of the BMP Plan must be commensurate with the size of the project, the severity of the site condition and potential for off-site damage, as provided in Article 5.

**Section 3.05 Maintenance of Records.**

Records of compliance with the provisions of the Permit shall be maintained in the office of the owner or the applicant, shall be available to the Contact Person and shall be made available at any time for review by the Official; provided, that if such records are maintained without the State of Alabama and, because of their size, cannot be transmitted to the Official by telecopier, such records must be delivered to the Official (at no expense to the City or the Official) within forty-eight (48) hours of the earliest of the receipt by the owner, applicant or Contact Person of a request by the Official for such records.

**Section 3.06 Amended Application; Transfer of Permit.**

- (a) A Permit may be amended, without the payment of an additional fee, upon the filing with the Official of an amended or restated Permit application, containing all changes from the original application; provided, that the holder of the Permit shows to the reasonable satisfaction of the Official that there are no proposed changes which may affect the quantity and/or quality of stormwater runoff. If an amended or restated application is filed with the Official with respect to land-disturbing activities for which a Permit has been issued, such existing Permit shall continue in effect, and the holder of the Permit may continue to operate under it unless and until an amended Permit is issued in response to the amended or restated application ("Amended Permit") at which time the original Permit shall expire, and all land-disturbing activities must be conducted in accordance with the Amended Permit.
- (b) A Permit may be transferred, without the payment of an additional fee, upon the filing with the Official of an application for transfer; provided, that the holder and proposed transferee of the Permit show to the reasonable satisfaction of the Official that, upon or following the transfer, there will be no proposed changes which may affect the quantity and/or quality of stormwater runoff. If there is a request for the transfer of a Permit and there are to be one or more changes in the operation of the project which is the source of the land-disturbing activity which may affect the quantity and/or quality of stormwater runoff, the new owner or operator of such project must apply to the City for a new Permit prior to his involvement with the operation of such project.

**Section 3.07 Signatory Requirements.**

- (a) All applications and correspondence required by this ordinance to be submitted to the Official shall be signed as follows:
  - (1) If an application or correspondence is submitted by a corporation, it must be signed by the president of the corporation or by a vice-president of the corporation who is in charge of a principal business function of the corporation, or any other person who performs

similar policy-making or decision-making functions for the corporation, or who has been authorized to sign such applications and/or correspondence by a resolution adopted by the board of directors of the corporation. Proof of the authority of the signatory shall be provided to the Official, upon his request.

- (2) If an application or correspondence is submitted by a limited liability company, it must be signed by a manager or other person who serves the same or similar function as the president of a corporation.
  - (3) If an application or correspondence is submitted by a partnership, it must be signed by a general partner of the partnership.
  - (4) If an application or correspondence is submitted by a sole proprietorship, it must be signed by the proprietor.
  - (5) If an application or correspondence is submitted by a municipality, the State or the federal government or by any municipal, state or federal agency, it must be signed by either the chief executive officer or a principal executive officer of any such government or by either the chief executive officer, a principal executive officer or a senior executive officer having responsibility for the overall operations of a principal geographic unit of any such governmental agency.
- (b) Any person signing any application or correspondence required by this ordinance shall make the following certification: "I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and that I have personally examined, and I am familiar with, the information in this document and such attachments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and civil penalty."

## **Article 4 EXCLUSION**

### **Section 4.01**

No person may conduct any land-disturbing activity without having obtained a Permit from the Official.

### **Section 4.02**

Land-disturbing activities shall include any land change which may result in soil erosion from water or wind and the movement of sediment to the MS4, including, but not limited to, the clearing, dredging, grading, excavating, transporting and filling of land, except that the term shall not include the following:

- (a) Any land change on the property about which the owner of the property has submitted information to the Authority proving, to the satisfaction of the Authority, that such property does not drain to the MS4. Such information may be submitted to the Official, who shall promptly deliver it to the Authority, and the determination as to whether such property drains to the MS4 shall be made by the Authority.
- (b) Agriculture.
- (c) Silviculture.
- (d) Such minor land-disturbing activities as home gardens, landscaping on individual residential lots (excluding landscaping performed by, or on behalf of, a developer or builder, who builds a house on any such lot), home repairs, home maintenance work, minor additions to houses, the construction, maintenance or repair of accessory structures and other related activities which result in minor soil erosion.
- (e) Minor land-disturbing activities such as individual connections for utility services and sewer services for single or two-family residences, minor grading for driveways, yard areas, and sidewalks, excluding any grading done by, or on behalf of, a developer or builder in connection with the construction of a house.
- (f) Minor maintenance, minor repair, and the minor extension of any existing underground public utility lines, except sewer lines; provided, that the utility company which owns such lines has received approval of a general BMP Plan from the Authority for such maintenance, repair, and extension; and provided further, that any utility company making a minor extension in connection with which the land disturbed consists of more than 1,000 linear feet must give the Official written notice of such extension prior to the commencement of such minor extension.
- (g) The construction, repair or rebuilding of railroad tracks.
- (h) Minor subsurface exploratory excavations under the direction of soils engineers or engineering geologists.

- (i) The opening of individual burial sites in property which has been approved for such use by all necessary governmental authorities.
- (j) Digging of water wells or environmental monitoring wells.

The activities referred to in items (b) through (i) above may be undertaken without a Permit; however, the persons conducting these excluded activities shall remain responsible for otherwise conducting such activities in accordance with the provisions of this ordinance and any other applicable law, including the proper control of sedimentation and runoff to the MS4. This ordinance shall apply to such land-disturbing activities that drain to the MS4 if a stormwater pollution problem is shown to be caused by such activity following monitoring procedures and complaints.

## **Article 5**

### **BMP APPROVAL REQUIREMENTS**

#### **Section 5.01 General Requirements.**

No land-disturbing activity shall be conducted within the City until a Permit has been issued by the Official allowing such activity pursuant to the provisions of this ordinance. The following are BMP approval requirements:

- (a) Persons conducting land-disturbing activities shall take all reasonable measures referred to, or provided for, in this ordinance to protect all public and private property from damage caused by such activities and to reduce stormwater pollution to the maximum extent practicable.
- (b) No land-disturbing activities subject to this ordinance shall be undertaken except in accordance with the following requirements:
  - (1) The person(s) proposing to conduct any land-disturbing activity or an agent, contractor or other representative of such person must contact the Official at least five (5) business days before commencement of the land-disturbing activity to advise the Official of the commencement of such land-disturbing activity, unless, for good cause shown, the Official permits such person, contractor, agent or other representative to contact him nearer to the date of the commencement of such land-disturbing activity.
  - (2) Other than land-clearing activities required to install the appropriate BMP in accordance with BMP Plans, any down slope erosion and sediment control measures, on-site stream channel protection and upslope diversion of drainage required by the BMP Plan shall be in place and functional before any clearing or earth-moving operations begin, and shall be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday, but shall be replaced at the end of the workday.
  - (3) The angle for graded slopes and fills shall be no greater than the angle, which can be retained by vegetative cover or other adequate erosion control devices or structures. Any slope or fill which has



been graded shall, within fourteen (14) days of the completion of such grading or the completion of any phase of grading, be planted or otherwise provided with a ground cover, materials, devices or structures sufficient to restrain erosion. The BMPs shall remain in place in accordance with the BMP Plan until the graded slope or fill is stabilized.

- (4) Adequate protective measures shall be provided for the containment of hazardous substances and any other materials which may pollute the MS4, including petroleum products, lubricants, and paint.
- (5) All control measures shall be checked, and repaired as necessary, monthly in dry periods and within twenty-four (24) hours after any rainfall at the site of .75 inch within a twenty-four (24)-hour period. During prolonged rainfalls, daily checking and, if necessary, repairing shall be done. The Permittee shall maintain written records of such checks and repairs, which records shall be subject to the inspection of the Official at any reasonable time.
- (6) The BMP Plan shall show the size of the disturbed area and a schedule of the projected starting and completion dates of the land-disturbing activity.
- (7) A site plan, accompanied by a written description of BMPs which are shown on the site plan and a schedule of implementation during land-disturbing activities and construction shall be furnished to the Official before the commencement of any land-disturbing activities.
- (8) A description of, and procedures for, proper storage, handling and disposal of construction materials stored on-site which could contribute to the pollutant loading to the MS4, shall be furnished to the Official before the commencement of any land-disturbing activities.

#### **Section 5.02 Design and Performance Standards.**

The following are required for all land-disturbing activities except those related to the construction of individual single-family residences.

All applications for a Permit must contain, or be accompanied by, the materials and information necessary to satisfy the requirements of Sections 5.01 and 5.02 and must be accompanied by soil erosion and sediment control plan ("Control Plan"). The Control Plan shall be prepared by a Qualified Credentialed Professional and shall include the following:

- (a) The Control Plan shall be accompanied by a map or plot of the property upon which land-disturbing activities are to be conducted, prepared by a registered land surveyor, showing the present contour lines of such property, and the present contour lines of at least the nearest twenty-five (25) feet of the properties immediately adjacent to such property and the existing grades and elevations of all streets which abut such property. Such map or plot shall show all existing

drainage facilities and all-natural drainage on such property and such adjacent property.

- (b) All proposed contours, the proposed temporary and permanent disposition of surface water and the proposed drainage structures; provided, however, the Control Plans for utility projects, except sewer projects, shall not be required to show the proposed contours.
- (c) The proposed contours in the map or plot shall be depicted in contour intervals of two (2) or fewer feet; provided, however, the Control Plans for utility projects, except sewer projects, shall not be required to show the proposed contours. All maps, plots, and plans submitted shall be on a sheet of paper at least twenty-four (24) inches by thirty-six (36) inches and drawn to a scale of not less than one-inch equals 100 feet. Contour intervals of more than two (2) feet and maps, plots or plans which are smaller than the required size may be approved by the Official, upon written request and for a good cause shown.
- (d) The Control Plan shall contain a description of the existing site conditions, a description of adjacent topographical features, the information necessary to determine the erosion qualities of the soil on the site, potential problem areas of soil and erosion and sedimentation, soil stabilization specifications, storm water management considerations, a projected time schedule for the commencement and completion of the land-disturbing activity, specifications for BMP Plan maintenance during the project and after the completion of the project, clearing and grading limits, and all other information needed to depict accurately the solutions to potential soil erosion and sedimentation problems to the MS4. The Control Plan shall include the series of BMPs and shall be reviewed by, and subject to the approval of, the Official before the issuance of the Permit.
- (e) Where appropriate, in the opinion of the qualified credentialed professional who prepares the Control Plan, to the maximum extent practicable, the Control Plan shall include measures to reduce erosion and other adverse impact to MS4 drainage which would result from an increase in the volume of water and the rate of runoff of water during the conduct of land-disturbing activities.
- (f) Whenever the Official determines that a Control Plan does not comply with this ordinance, he shall notify the applicant in writing of how the Control Plan does not comply with this ordinance.
- (g) To the maximum extent practicable, sediment in runoff water must be minimized by using appropriate BMPs.
- (h) Structural controls shall be designed and maintained as required to minimize erosion and pollution to the maximum extent practicable. All surface water flowing toward the construction area shall, to the maximum extent practicable, either be passed through the site in a protected channel or 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 the disturbed areas or drainage areas, to minimize erosion and to control sediment, to the maximum extent practicable. Discharges from sediment basins and traps must be conducted in a manner consistent with good engineering practices. Sediment-laden, or otherwise polluted, water discharged to MS4 must be addressed in a manner consistent with good engineering practices and the requirements of this ordinance.

- (i) Control measures shall be maintained as an effective barrier to sedimentation and erosion in accordance with the provisions of this ordinance.
- (j) There shall be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge. The stormwater discharge to an MS4 must not cause an unnatural color (except dyes or other substances discharged to an MS4 for the purpose of environmental studies and which do not have a harmful effect on the bodies of water within the MS4) or odor in the community waters. The stormwater discharge to the MS4 must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life or fish and aquatic life in the community waters.
- (k) When the land-disturbing activity is finished, and stable vegetation or other permanent controls have been established on all remaining exposed soil, the owner of the land where the land-disturbing activity was conducted, or his authorized agent, shall notify the Official of these facts, and request a final inspection. The Official shall then inspect the site within five (5) working days after receipt of the notice, and may require additional measures to stabilize the soil and control erosion and sedimentation. If the Official requires additional measures, written notice of such additional measures shall be delivered to the owner, and the owner shall continue to be covered by the Permit issued with respect to the land-disturbing activity until a final, and complete inspection is made and the Official approves the project as having been satisfactorily completed and delivers to the owner, within ten (10) days of the date of such approval, a certification of completion showing that the requirements of the Permit have been fulfilled. At that time the site and/or the project constructed thereon may come under the operation of other ordinances of the City.

**Article 6**  
**MONITORING AND INSPECTION**

**Section 6.01**

The Official may periodically monitor the quality of stormwater and the concentration of pollutants in stormwater discharges from land-disturbing activities permitted to the MS4 pursuant to this ordinance.

**Section 6.02 Inspections.**

- (a) The Official, bearing proper identification, may enter and inspect all land-disturbing activities for regular periodic inspections, investigations, monitoring, observations, measurements, enforcement, sampling, and testing to verify compliance with the provisions of this ordinance and the specific BMP Plans and Control Plans for such land-disturbing activities. The Official shall notify the owner of such property, his Contact Person or his representative on the construction site before inspection, and the inspections shall be conducted at reasonable times. The owner or operator of a construction site concerning which an NPDES permit has been issued shall provide the Official with the information required in Section 3.01(c) before the commencement of the work on the construction site. The Official shall inspect the construction site to confirm the implementation and the maintenance of BMP Plans. Otherwise, such site shall be inspected when the Official believes, as a result of complaints or monitoring activity, that land-disturbing activities on the site are causing a substantial pollutant loading which threatens the MS4.
- (b) Upon the refusal by any property owner to allow the Official to enter, or to continue an inspection on, a site on which land-disturbing activities or construction work is being done, the Official shall terminate the inspection or confine the inspection to areas to which no objection is raised. If an agent of the Official was making or attempting to make, such inspection, the agent shall promptly report to the Official the refusal and the reasons for the refusal, if the reasons are known by the agent. The Official may seek appropriate legal remedies to enable him to make or complete such inspection, including seeking appropriate legal remedies from any court having jurisdiction over the matter. If the court grants a remedy to the Official, the property owner must reimburse the City all of the costs and expenses incurred by the City in obtaining such remedy, including court costs and reasonable attorneys' fees.
- (c) If the Official has reasonable cause to believe that discharges from the land-disturbing activities to the MS4 may cause an imminent threat to human health or the environment, an inspection of the site may take place at any time and without notice to the owner of the property or a representative on site. The Official shall present proper credentials upon request of the owner or his representative.
- (d) At any time during the conduct of an inspection, or at such other times as the Official may request information from an owner or his representative,



the owner or representative may identify areas of its business, material or processes which contain a trade secret and an inspection of which might reveal such trade secret. If the Official has no clear and convincing reason to question such assertion of the owner or his representative, the inspection report shall note that trade secret information has been omitted. To the extent practicable, the Official shall protect all information which is designated as a trade secret by the owner or his representative.

## **Article 7 ENFORCEMENT AND ABATEMENT**

### **Section 7.01 NPDES Permits for Storm Water Discharge Associated with Construction Activities.**

- (a) No enforcement action shall be taken by the City for a violation of the terms of this ordinance if any of the following has occurred:
  - (1) ADEM has issued a notice of violation with respect to the same alleged violation and is proceeding with an enforcement action with respect to such alleged violation;
  - (2) ADEM has issued an administrative order with respect to the same alleged violation and is proceeding with an enforcement action concerning such violation; or
  - (3) ADEM has commenced, and is proceeding with, an enforcement action, or has completed any other type of administrative or civil action, concerning such alleged violation.
- (b) Any determination or resolution made by ADEM with respect to an alleged violation shall be final, and the alleged violation shall not be made the subject of any additional enforcement action by the City; provided, however, that an enforcement action may be pursued by the City for continued or continuing substantial violations, subject to the provisions of Section 7.03(b) and pursuant to the following:
  - (1) ADEM will provide the Official with access to the ADEM NPDES permits issued with respect to each property within its jurisdiction, including inspections and notification of any enforcement actions taken by ADEM.
  - (2) The Official will notify ADEM and the permit holder, in writing, when the Official demonstrates that an NPDES permit holder is causing a substantial pollutant loading to the MS4.
  - (3) The Official may rely on ADEM to regulate and to take enforcement actions against Permittees until a Permittee is in continuing substantial violation of its NPDES permit and ADEM has failed to respond in a timely manner in accordance with Code of Alabama 1975, § 11-89C-1 et seq. If there is a continuing substantial violation of an ADEM NPDES permit and ADEM fails to respond as stated above, the Permittee shall be subject to this ordinance for that violation.

**Section 7.02 Immediate Threats to Public Health or Welfare.**

Notwithstanding any other provision in this ordinance to the contrary, in the event of an immediate threat to the public health or welfare, the Official may take all appropriate measures to remove or alleviate such threat.

**Section 7.03 Notification; Enforcement Remedies.**

- (a) Verbal Warning: Whenever the Official finds that any person is in violation of any provision of this ordinance, or any order issued hereunder, the Official or his agent may serve upon such person a verbal warning of violation.
- (b) Notification of Violation: Whenever the Official finds that any person is in violation of any provision of this ordinance, or any order issued hereunder, the Official or his agent may serve upon such person written notice of the violation. Within ten (10) calendar days of the date of such notice, an explanation of the violation and a plan for the satisfactory correction and future prevention thereof, including specific required actions, shall be submitted to the Official. Submission of such plan shall in no way relieve such person in violation of this ordinance of liability for any violations occurring before or after receipt of the notice of violation.
- (c) Compliance Order: When the Official finds that any person has violated, or continues to violate, this ordinance, he may issue a compliance order to the violator, directing that, within a specified time period, adequate structures and devices be installed, or procedures implemented and properly operated, or other action be taken, to remedy such violation. Compliance orders may also contain such other requirements as may be reasonably necessary and appropriate to address such violation, including the construction of appropriate structures, installation of devices and self-monitoring and management practices.
- (d) Cease and Desist Orders: When the Official finds that any person has violated, or continues to violate, this ordinance or any order issued under this ordinance; the Official may issue an order to such person to cease and desist all such violations immediately, and direct such person in violation of this ordinance to:
  - (1) comply with this ordinance forthwith; or
  - (2) take such appropriate remedial or preventive action as may be required to address properly a continuing or threatened a violation of this ordinance, including halting operations and terminating the discharge.

**Section 7.04 Unlawful Acts, Misdemeanor.**

It shall be unlawful for any person to:

- (a) violate any provision of this ordinance;
- (b) violate the provisions of any Permit issued pursuant to this ordinance; Such person shall be guilty of a misdemeanor; and each day of such violation, failure or refusal to comply with this ordinance shall be deemed a separate offense and punishable accordingly. Any person found to be in violation of

any of the provisions of this ordinance shall be punished by a fine of not less than \$100.00 and not more than \$500.00 and/or up to 180 days in jail.

**Section 7.05 Judicial Proceedings and Relief.**

- (a) The Official may initiate proceedings in any court of competent jurisdiction against any person who has, or who, the Official has reason to believe, is about to:
- (1) violate any provision of this ordinance;
  - (2) violate any provision of a Permit;
  - (3) fail or refuse to comply with any lawful order issued by the Official
- (b) The Official, with the consent of the City Council, may also initiate civil proceedings in any court of competent jurisdiction seeking monetary damages for any damages caused to public stormwater facilities by any person, and may seek injunctive or other equitable relief to enforce compliance with the provisions of this ordinance or to force compliance with any lawful orders of the Official or the Board.

**Article 8  
MISCELLANEOUS**

**Section 8.01 Notices.**

Whenever the City is required or permitted to:

- (a) give notice to any party; such notice must be in writing; or
- (b) deliver a document to any party; such notice or document may be delivered by personal delivery, certified mail (return receipt requested), registered mail (return receipt requested) or a generally recognized overnight carrier, to the address of such party which is in the records of the City or is otherwise known to the City.

**Section 8.02 References.**

Whenever an Article or Section is referred to in this ordinance, unless the context indicates the contrary, such reference shall be to an article or section of this ordinance.

**Section 8.03 Severability.**

The provisions of this ordinance are severable. If any part of this ordinance is determined by a court of law to be invalid, unenforceable or unconstitutional, such determination shall not affect any other part of this ordinance.

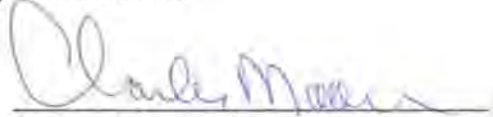
**Section 8.04 Captions.**

The captions of articles and sections are for the purpose of reference only, and such captions shall not affect the meaning of any provision of this ordinance.

**Section 8.05 Effective Date.**

This ordinance shall be published as required by law and shall become effective June 7, 2018.

**ADOPTED & APPROVED** this the 7<sup>th</sup> day of June 2018.

  
Charles Moore, Mayor

**CERTIFICATION**

I, James D. Stewart Jr., City Clerk of the City of Irondale, Alabama, hereby certifies the above to be a true and correct copy of a resolution adopted by the City Council of the City of Irondale at its regular meeting held on June 7, 2018, as same appears in the minutes of record of said meeting.

ATTEST:

  
James D. Stewart Jr., City Clerk

# SUBDIVISION REGULATIONS

for the

City of Irondale

Adopted

August 2, 1983

Ordinance Number 464-83

Book Number 55

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IRONDALE PLANNING COMMISSION

RULES OF PROCEDURE

1. Rules.

"Roberts Rules of Order" shall govern the order of business and conduct of meetings of the Planning Commission.

2. Meetings.

- (a) The Planning and Zoning Commission will hold one (1) regular scheduled meeting per month on the last Thursday of each month, commencing at 7:00 p.m.
- (b) Special meetings of the Planning Commission may be called by the Chairman upon the giving of three (3) days written notice to the membership.
- (c) Extraordinary meetings of the Planning Commission may be called by the Chairman or Vice-Chairman upon the request of any three (3) members of the Planning Commission, provided that the membership shall be notified by telephone at least four (4) hours prior to such meeting.
- (d) All meetings of the Planning Commission shall be held in the City Hall.

3. Agenda.

An agenda for each meeting shall be prepared by the City Clerk approved by the Chairman, and mailed to members not later than six (6) days prior to each regular monthly meeting of the Planning Commission.

4. Applications.

Subdivision plats and applications for recommendations as to vacation of lands shall be filed and handled in accordance with the provisions of the Subdivision Regulations.



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5. Study.

The Planning Commission may defer action on any matter, presented to it at a regular meeting, until the next regular meeting of the Commission, so that proper study of the matter may be made by the membership.

6. Quorum.

Unless otherwise provided by statute, a majority of the members shall constitute a quorum for the conduct of business.

7. Subdivision Plats.

The City Clerk, or the Chairman of the Planning Commission shall be the persons authorized to sign plats approved by the Planning Commission.

IRONDALE PLANNING COMMISSION  
SUBDIVISION REGULATIONS

ARTICLE I. GENERAL PROVISIONS

1. Authority.

Under the provisions of Title 11-52 (1 thru 84) Code of Alabama, 1975, which provisions are hereby made a part hereof, these following regulations governing the subdivisions of land and hereby adopted by the Irondale Planning and Zoning Commission. A copy of these regulations shall be certified to the Probate Judge of Jefferson County, Alabama, and returned to the Clerk of the City of Irondale.

2. Jurisdiction.

On and after August 2, 1933 these regulations shall govern each and every subdivision of land within the corporate limits of the City of Irondale, Alabama, as now or hereafter established, and within such territory outside the corporate limits as the Irondale Planning Commission shall now or hereafter have within its jurisdiction.

3. Separability and Severability.

Should any section or provision of these regulations be for any reason held void or invalid, it shall not affect the validity of any other section or provision hereof which is not itself void or invalid.

4. Definitions.

- (a) Alley: Any public way designed primarily for vehicular access to the back or side or premises otherwise abutting on a street, unless officially designated otherwise.
- (b) Architect: A registered professional architect in good standing with the State Board of Registration for Practicing Architects and licensed to do business in the City of Irondale.
- (c) City: The City of Irondale, Alabama, together with any extraterritorial planning jurisdiction thereof.

- (d) City Council: The chief legislative body of the City.
- (e) Common Areas: All that area within the bounds of the project and including all of the building or buildings, except those units and/or areas specifically deeded to an owner, such as, but not limited to:
  1. The land on which the building or buildings are located.
  2. The foundation columns, girders, beams, supports, main walls, roofs, corridors, entrances and exists of the building.
  3. The basement, yards, gardens and parking areas.
  4. The premises for the lodging of janitors or persons in charge of the property.
  5. Installations of central services such as power, light, gas, hot water, cold water, heating, and refrigeration, air conditioning and incineration.
  6. The elevators, tanks, pumps, motors, fans, compressors, ducts and in general all apparatus and installation existing for common use.
  7. All other parts of the property necessary for or convenient to the existence maintenance or safety of common use areas.
- (f) City Clerk: The City Clerk of the City of Irondale, Alabama.
- (g) Condominium: A joint dominion or sovereignty, joint ownership in common with others in a parcel of land and in certain parts of a building thereon, which would normally be used by all occupants, such as yards, foundations, etc., which are the common areas, together with an individual ownership in fee title or a particular unit and/or units in such a building or project.
- (h) Comprehensive Plan: The official city plan or master plan for the City of Irondale adopted in accordance with the provisions of Title 11-52 (1 thru 84) Code of Alabama, 1975
- (i) Engineer: A registered professional engineer, qualified to practice in this area of expertise, in good standing with the State Board of Registration for Professional Engineers and Land Surveyors, and licensed to do business in the City of Irondale.

- (j) Final Plat: The completed subdivision plan in form for approval and recording.
- (k) Lot: A parcel or portion of land in a subdivision or plat of land separated from other parcels or portions of land by description as on a subdivision or record of survey, map or by metes and bounds of what is existing or by any other approved description.
- (l) Major Street Plan: The official Major Street Plan of the City of Irondale adopted, amended and recorded in accordance with the provisions of Title 11-52, Code of Alabama, 1975.
- (m) Planned Development Project: A tract of land where improvements and development is to be controlled by a development plan duly approved and adopted by the Irondale Planning and Zoning Commission.
- (n) Planning Commission: The Irondale Planning and Zoning Commission, a legal agency of the City.
- (o) Preliminary Plat: A tentative plat of a proposed subdivision for presentation to the Planning Commission for its consideration.
- (p) Roadway: That portion of a street between the regularly established curb lines, or that part of a street or alley devoted to vehicular traffic.
- (q) Sidewalk Area: That portion of a street not included in the roadway, and devoted in whole or in part to pedestrian traffic.
- (r) Street: A public way for the vehicular or pedestrian traffic, whether designated as a street, highway, thoroughfare, parkway, throughway, road, avenue, boulevard, land, place or however otherwise designated, excepting, however, an alley.
- (s) Subdivider or Applicant: Any individual, firm, association, syndicate, copartnership, corporation, trust or any other legal entity commencing proceedings under these regulations to effect a subdivision of land hereunder for himself or for another.

- (t) Subdivision: The division of a lot, tract, or parcel of land into two (2) or more lots, plots, sites, or other divisions of land, whether described by metes and bounds or by any other description, for the purpose, whether immediate or future of sale or building development. Also, unit condominium division of land and buildings shall be included in the meaning of "subdivision" as defined herein. It includes resubdivision and, where appropriate to the context, relates to the process of subdividing or to the land, buildings or territory subdivided.
- (u) Surveyor: A qualified Registered Land Surveyor in good standing with the State Board of Registration for P.E. & L.S. and licensed to do business in the City of Irondale.
- (v) Unit: A part of the property designed or intended for any type of independent use including one or more floors of a part or parts thereof, which has direct access to a public street, or way, or to a common area leading to a public street, or way, or to an easement of right-of-way leading to a public street, or way.

#### 5. Amendments.

The Planning Commission may from time to time adopt amendments that will tend to increase the effectiveness of these Subdivision Regulations or expedite the approval of subdivision plats. These Subdivision Regulations and amendments thereto may be changed or amended by the Planning Commission after a public hearing by giving due notice as required by law.

## ARTICLE II. PROCEDURE

### 1. Application for Approval.

- (a) To obtain approval of a proposed subdivision, the Subdivider or Applicant shall submit to the Planning Commission a Preliminary Plat, a Vicinity Sketch, a list of the names and addresses of owners of record of parcels of land immediately adjoining the proposed subdivision, and final Plat prepared in accordance with the requirements as set forth in Article II herein below. No owner of land or Subdivider shall proceed with improvement or sale of land subdivided after July 5, 1983, without the written approval of the Planning Commission.
- (b) The Subdivider shall apply and submit ~~three~~ copies of the Preliminary Plat and five (5) copies of a Vicinity Sketch to the office of the City Clerk of the City of Irondale at least fifteen (15) days prior to a regularly scheduled meeting of the Planning Commission, Otherwise, the proposed subdivision shall not be considered at that meeting.
- (c) The City Clerk shall forward ~~two~~ (2) of said copies to the City Engineer who shall submit his written recommendations, if any, to the Planning Commission by the time of its initial hearing on said plat.

### 2. Fees and Notice; Resubdivisions.

- (a) To defray the cost of filing said application and Preliminary Plat, notifying interested parties of, investigations of, and holding a hearing upon, a fee of ~~fifty dollars (\$50)~~ shall be paid by the Subdivider at the time of filing the application for approval of the Preliminary Plat, together with the cost of giving legal notice.
- (b) ~~Notice by certified mail~~ to parties owning contiguous properties shall be given at least ten (10) days prior to the hearing on the Preliminary Plat, in accordance with the provisions of of Title 11-52 (1 thru 84) Code of Alabama, 1975.

- (c) . When application is made for approval of a resubdivision under the provisions of subsections (b) and (c) of Section 9 of this Article, the fee of fifty dollars (\$50) shall be paid and the Subdivider may also pay the Final Plat fee at the same time.

### 3. Preliminary Plat Approval.

The Planning Commission shall approve, approve conditionally, or disapprove such Preliminary Plat within thirty (30) days after the submission thereof to it at its regular meeting. If approved conditionally the conditions and reasons therefor shall be stated and, if necessary, the Planning Commission may require the Subdivider to submit a revised Preliminary Plat. If any of the requirements are modified or waived, the reasons for such shall be specified. If the Planning Commission should disapprove the Preliminary Plat, the reasons for such action shall be stated and if possible recommendations made on the basis of which the proposed Subdivision would be approved. One (1) copy of the Preliminary Plat as acted upon by the Planning Commission shall be retained in its office, one (1) copy forwarded to the City Engineer, and one (1) copy returned to the Subdivider.

### 4. Effect of Preliminary Plat Approval.

Receipt of the approved copy of the Preliminary Plat by the Subdivider is authorization, subject to the obtaining of proper permits, that he may proceed with the construction of any improvements under the direction and supervision of the City Engineer, and with the staking of streets and lots in preparation for the Final Plat.

### 5. Engineering Requirements.

- (a) The Subdivider shall furnish the City Engineer all plans and information necessary for engineering consideration and approval for the construction of the proposed improvements. Such plans and information shall be furnished separately and apart from the Preliminary Plat and Vicinity Sketch. All storm drainage systems, sanitary sewer systems, on-site disposal systems, roadway horizontal and vertical alignment and cross-section and other design related information shall be done by a

Registered Professional Engineer, licensed in the State of Alabama and experienced in such design. All layout of lots and property lines shall be done by a Registered Land Surveyor, licensed in the State of Alabama.

- (b) Before starting construction, necessary arrangements must be made between the Subdivider and the City Engineer for adequate laboratory and construction inspection to insure that the improvements shall comply with the Standard Construction Specifications of the City of Irondale.

#### 6. Final Plat Filing and Execution.

- (a) The Subdivider shall file the Final Plat and four (4) copies thereof, which copies shall be distributed as in Section 1 (c) of this Article by the City Clerk at least ten (10) days prior to the date of the meeting of the Subdivision Committee at which time it is to be considered.
- (b) All Final Plats shall have been signed and executed by all necessary parties before being filed.

#### 7. Approval of Final Plat.

Approval or disapproval of the Final Plat shall take place within thirty (30) days after the date of submittal unless the Subdivider agrees to an extension of that time. If the Final Plat is disapproved, the grounds for refusal shall be stated in the records of the Planning and Zoning Commission. The action of the Planning Commission shall be shown on the Final Plat with the date of action shown over the signature of the person authorized by the Planning and Zoning Commission to sign such plats.

Approval of the Final Plat carries with it the condition that the Planning and Zoning Commission must be notified in writing by the City Engineer that either (1) all required improvements have been satisfactorily installed and completed by the Subdivider, or (2) a bond has been posted to secure the same, before such Final Plat is signed as approved by the Planning Commission and the City Engineer and before said Plat is submitted to the Council for passage of



the resolution assenting to the dedication of any public ways or lands.

8. Final Plat Fees and Recording.

- (a) When application is made for Final Plat approval, the Subdivider shall pay any additional fee to defray the expense of investigating, hearing, and acting upon the Final Plat, as follows:

~~Each residential lot in subdivision,.....\$5.00~~

~~Each acre or portion thereof in subdivision not zoned for residential use or devoted to public purpose.....\$5.00~~

~~Actual cost of recording and making four (4) copies of Final Plat.~~

- (b) ~~The Final Plat shall be filed for record in the Office of the Probate Judge of Jefferson County by the City as agent for the Owner. Three (3) copies shall be made showing the Map Book Volume and page numbers where the Final Plat is recorded; one (1) of said copies shall be sent to and filed by the Engineering Department, one (1) to the Building Department, and one (1) shall be retained by the City Clerk. Said Final Plat shall then be returned to the Subdivider.~~

9. Small Subdivisions and Resubdivisions.

- (a) Where a proposed subdivision is of such small size or contains so few lots as to present no engineering problems and few, if any, planning problems, the Planning Commission may waive the filing of the Preliminary Plat, may require only the five (5) copies of the Final Plat and five (5) copies of the Vicinity Sketch, and may approve the final Plat at the time of the initial hearing.

- (b) Where a proposed resubdivision upgrades or maintains relatively constant lot sizes or conditions and the Subdivider has secured a written waiver of legal notice and hearing from the immediately adjoining property owners, the City Engineer and the City Clerk may, after investigation, approve said resubdivision for immediate recordation and the Planning Commission shall ratify their action at its next regular meeting at which time said application appears on its agenda.
- (c) Where applications for resubdivision are filed under (b) above, such shall be filed together with all maps and other matter on or before 5 p.m., ten (10) days prior to a regular scheduled meeting of the Planning Commission. The City Engineer and the City Clerk may recommend said applications to be held over for regular action by the Planning Commission if they deem such advisable.

### ARTICLE III. PLAT REQUIREMENTS

#### 1. Preliminary Plat.

The Preliminary Plat shall show the following:

- (a) Date, North Point, Title, and Graphic Scale: Scale shall not be more than sixty (60) feet to the inch unless lot contains one (1) acre or more, but in no event more than one hundred (100) feet to the inch.
- (b) Topography: Based on City of Irondale, Alabama, Geodetic, or U. S. Coast and Geodetic Sea Level Datum. Contours at one (1) foot interval, unless grade is five per cent (5%) - ten per cent (10%) in which case contours shall be at two (2) foot intervals.
- (c) Streets: Names, together with a letter from the Post Office Department stating that there is no duplication of proposed names within the metropolitan area of the City, right-of-way and roadway widths, and approximate grades.
- (d) Other Rights-of-way or Easements: Locations, widths and purposes.
- (e) Utilities: Location of those on or adjacent to the tract to be subdivided, including size and elevation.
- (f) Lot lines, Lot and Block numbers and approximate dimensions.
- (g) Number of Section, Township and Range with exact ties to all recognized existing quarter section corners within or close to the proposed Subdivision.
- (h) If any portion of the land of the proposed Subdivision is subject to inundation by storm sewers or overflow or ponding of local storm water, such fact and portion shall be clearly shown and identified.
- (i) Proposed Street Lights and Signs: Location, size and type including proposed traffic control signage and/or signals.
- (j) Proposed parks, school sites, or other public open spaces.
- (k) Any other information that may be necessary for the full and proper consideration of the proposed Subdivision.

Each modification, variance, or waiver of these Subdivision Regulations sought by a Subdivider shall be specially applied for, in writing by the Subdivider. A copy of said application shall be filed with the City Clerk and to the City Engineer following the closing of each docket. Any condition shown on the Preliminary or Final Plat (or on engineering plans or data called for by Section 5 of Article II) which would require a modification, variance, or waiver, shall constitute a ground for disapproval of the Preliminary or Final Plat unless such special application for modification, variance, or waiver is made.

## 2. Vicinity Sketch.

A Vicinity Sketch or key map shall be shown on or accompany the Preliminary Plat. This sketch or map shall show all existing subdivisions, streets, and tract lines of acreage parcels, and right-of-way width of all streets abutting the proposed subdivision. It shall also show streets and alleys in the proposed subdivision may connect with existing and proposed streets and alleys in neighboring subdivisions or undeveloped property to produce the most advantageous development of the entire neighboring area.

## 3. The Final Plat.

The Final Plat shall be an original drawing in ink, on mylar, and shall be tied to an accepted section corner based on the U.S. Government Survey of this area which shows the relationship to the Huntsville Base Line and the Huntsville Meridan. A resurvey of a part of a subdivision may be tied to the original subdivision. This plat also show the following:

- (a) Tract boundary lines with order of closure of unadjusted survey, right-of-way lines of streets, easements, and other right-of-way, and property lines of lots, with accurate dimensions, bearings, of deflection angles, radii, arcs, and central angles of all curves.
- (b) Name and right-of-way width of each street and other right-of-way.

- (c) Location, dimensions, and purposes of any easements.
- (d) Number to identify each lot or site.
- (e) Purpose for which sites, other than residential lots, are dedicated or reserved, it being understood that any reservations of areas for other than residential purposes shall be subject to the proper zoning thereof.
- (f) The minimum building setback line on all lots and other sites.
- (g) Location and description of monuments. (Iron pipes shall be designated by a small open circle at point of installation.)
- (h) Reference to recorded subdivision plats of adjoining platted land by Map Book Volume and page number.
- (i) Title, graphic scale, written scale, north arrow, name and registration number of surveyor, and date, together with the quarter section or quarter sections in which the subdivision is located based on the Government Survey of that area.
- (j) Space for the approval of the City Engineer and the Irondale Planning and Zoning Commission.
- (k) The total acreage in a subdivision not zoned for residential or devoted to public purposes.
- (l) On all lots when there is no mortgagee, whether there is a dedication of property for street purposes or not, a certificate substantially in form as follows:

STATE OF ALABAMA  
JEFFERSON COUNTY

The undersigned \_\_\_\_\_, surveyor, and \_\_\_\_\_ owner(s), hereby certify that this plat or map was made pursuant to a survey made by said surveyor and that said survey and this plat or map were made at the instance of said owner(s); that this plat or map is a true and correct plat or map of lands shown therein and known or to be known as (name of subdivision or resurvey) showing the subdivisions into which is proposed to divide said lands, giving the length, width and name of each street, as well as the number of each lot and block and showing the relation of the lands to the

government survey (or, if the plot is a resurvey of an existing recorded subdivision, "showing the relation of the lands to the survey of \_\_\_\_\_ as recorded in the probate Office of Jefferson County in Map Book \_\_\_\_\_, page \_\_\_\_\_"); and that iron pins have been installed at all lot corners and curve points as shown and designated by small open circles on said plat or map. Said owner(s) also certifies (certify) that he (she, they, it) is (are) the owner(s) of said lands and that the same are not subject to any mortgage. Said owner(s) dedicates (dedicate) streets, alleys and public grounds as shown by said plat or map. Said owner(s) agrees (agree) that the City of Irondale may at any time change the natural or existing grade of any street, alley or public grounds, or any part thereof, from the natural or existing grade to the permanent grade without the payment of compensation or damages to the abutting owner; and this agreement shall be a covenant running with the lands. The undersigned appoints the City of Irondale as agent for the purpose of filing said plat or map, together with this instrument, for record, and certify that we have full authority to execute this instrument and map.

Dated \_\_\_\_\_, 19\_\_.

(Execution and Acknowledgement by Surveyor and Owner(s).)

- (m) On all plats when there is a mortgagee, whether there is a dedication of property for street purposes or not, a certificate substantially in form as follows:

STATE OF ALABAMA  
JEFFERSON COUNTY

The undersigned \_\_\_\_\_, surveyor, and \_\_\_\_\_ owner(s), hereby certify that this plat or map was made pursuant to a survey made by said surveyor and that said survey and this plat or map were made and correct map of lands shown therein

and known or to be known as (name of subdivision or resurvey) showing the subdivisions into which it is proposed to divide said lands, giving the length and bearings of the boundaries of each lot and its number, showing the streets, alleys and public grounds, giving the bearings, length, width and name of each street, as well as the number of each lot and block, and showing the relation of the lands to the government survey (or, if the plot is a resurvey of an existing recorded subdivision, "showing the relation of the lands to the survey of \_\_\_\_\_ as recorded in the Probate Office of Jefferson County in Map Book \_\_\_\_\_, page \_\_\_\_\_"); and that iron pins have been installed at all lot corners and curve points as shown and designated by small open circles on said plat or map. Said owner(s) also certifies (certify) that he (she, they, it) is (are) the owner(s) of said lands and that the same are not subject to any mortgage, except a mortgage or mortgages held by the following mortgagee(s):

Said owner(s) and said mortgagee(s) dedicate streets, alleys, and public grounds as shown by said plat or map. Said owner(s) and said mortgagee(s) agree that the City of Irondale may at any time change the natural or existing grade of any street, alley or public grounds, or any part thereof, from the natural or existing grade to the permanent grade without the payment of compensation or damages to the abutting owner; and this agreement shall be a covenant running with the lands. The undersigned appoints the City of Irondale as agent for the purpose of filing said plat or map, together with this instrument, for record, and certify that we have full authority to execute this instrument and map.

Dated \_\_\_\_\_, 19\_\_.

(Executed and Acknowledgement by Surveyor, Owner(s) and Mortgagee(s).)

- (n) Notary's acknowledgement of the certificate referred to in (l) or (m) above, substantially in form as follows:

STATE OF ALABAMA  
JEFFERSON COUNTY

I, \_\_\_\_\_, as Notary Public in and for said County and State, do hereby certify that \_\_\_\_\_, whose name is signed to the foregoing certificate as Surveyor, and \_\_\_\_\_, whose name is signed to same as Owner (and \_\_\_\_\_, whose name is signed to same as Mortgagee), that after having been duly informed of the contents of said certificate, they executed same voluntarily as such individuals (or in any other capacities) with full authority therefor.

Given under my hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_.

\_\_\_\_\_  
Notary Public

- (o) On all plats where there is a dedication of land for street purposes, whether in the form of new streets, additional right-of-way for existing streets, or merely curve radii where there were angle corners formerly existing, a resolution substantially in for as follows:

BE IT RESOLVED BY the Council of the City of Irondale that the assent of this body be, and the same hereby is, given to the dedication of the streets, alleys and public grounds as shown on plat or map of \_\_\_\_\_ which said plat or map is certified to have been made by \_\_\_\_\_ as surveyor, at the instance of \_\_\_\_\_ as owner, and has been exhibited to this Council, said plat or map being further identified by a recital of the approval of this Council signed by \_\_\_\_\_ City Clerk, of even date herewith. But this shall not be construed as an assumption of dominion by the City over any street, alley or



public grounds shown on said plat or map or impose liability upon the City for the upkeep of same.

- (p) Where a street or alley has been vacated, a note on the plat indicating such and referring to the recorded instruments of vacation by Deed Book and page number.
- (q) If there are existing structures on land proposed to be subdivided or resubdivided or on immediately adjoining land in which the Subdivider has or has had or will have an interest, three (3) copies of a survey plot plan showing the exact location of such structures, with their relation to the proposed subdivision or resubdivision shall accompany the Final Plat, two (2) of which shall be forwarded to the City Engineer.
- (r) The Final Plat shall be accompanied by three (3) copies of any Protective Covenants running with the land in form of recording.

## ARTICLE IV. DESIGN STANDARDS

### 1. Street Plan.

- (a) All streets shall be platted along contour elevations which will result in minimum grades and greatest visibility wherever practicable, with consideration given to the anticipated use of the land.
- (b) The proposed street layout shall be made according to good land planning practice for the type development proposed and shall be coordinated with the street systems of the surrounding areas. All streets must provide for the continuation or appropriate projection of principle streets in surrounding areas and provide reasonable means of ingress and egress for surrounding acreage tracts. Street patterns in all subdivisions shall be in conformity with the Major Street Plan of the City of Irondale.
- (c) In subdivisions which border on or have included within the proposed areas to be subdivided any expressway or major or minor arterial street or streets, access to lots abutting such major traffic arteries shall be provided in a manner such that the individual lots shall not have direct access to such expressway or arterial street.
- (d) Reserve strips or "spite" strips for unspecified or unacceptable purposes are prohibited. Without special approval of the Planning and Zoning Commission and the City Council there shall be no ditches permitted within a developed subdivision for the conveyance of the storm water unless said open ditch remains within the bounds and flow patterns of natural and undisturbed drainage way.
- (e) In the event a development is deemed to have probable effect of detrimentally changing the downstream storm water patterns of existing developed area the City Engineer may require the developer to provide for storm detention facilities that will minimize the impact of the upstream development on the downstream

development. These retention facilities shall be designed to retain the developed volume of runoff from a 25 year 24 hour storm with a release rate equal to the undeveloped peak discharge rate of a 10 year 24 hour storm event. Overflow structures from retention facilities shall be designed to safely and adequately pass a storm event appropriate to the downstream conditions when safety and public health are considered.

(f) Streets shall conform to the following standards:

1. The geometric design of all roadways for streets classified as freeways, expressways, major arterials and minor arterials shall conform generally with A Policy on Arterial Highways in Urban Areas, published by the American Association of State Highway Officials, including any published supplement to this policy, but in no case shall the minimum standards be less than the following, except as provided in this Article under Section 1., Subsection (3), Item (1) and in Article VI, Section 1, of these Subdivision Regulations.

	Minimum Right-of-Way	Minimum Pavement Width
a. Freeways and/or Expressways	200 Feet	Ala. Hwy. Dept. Std.
b. Major Arterial Street	100 Feet	48 Feet
c. Minor Arterial Street	80 Feet	26 Feet

2. Collector Streets shall conform to the following standards:

MINIMUM COLLECTOR STREET DESIGN STANDARDS

	<u>TOPOGRAPHIC GRADIENTS</u>		
	0-8%	8.1 - 15%	Over 15%
a. Right-of-way Width in feet	60	60	60
b. Pavement Width in feet	24	24	24
c. Minimum Sight Distance in feet	250	200	150
d. Maximum Grade	12%	12%	12%
e. Minimum Centerline Radii in feet	350	350	350
f. Sidewalks (minimum width in feet)	4	4	4
g.	The minimum distance between the facing of the curb and the required sidewalk shall be three (3) feet.		
h.	All curbs and gutters installed in conformity with these regulations shall be minimum six (6) inch vertical face with one (1) foot of gutter, or an overall width of combined curb and gutter of eighteen (18) inches.		
i.	The minimum spacing of collector street intersection along any major arterial or minor arterial street shall be 1300 feet from centerline to centerline.		
j.	All commercial or industrial service streets shall be constructed to the minimum collector street standards.		

3. Local streets shall conform to the following standards:

MINIMUM LOCAL STREET DESIGN STANDARDS

TOPOGRAPHIC GRADIENTS

	0-8%	8.1 - 15%	OVER 15%
a. Right-of-way Width in Feet	60	60	60
b. Pavement Width in Feet	24	24	24
c. Minimum Sight Distance in Feet	200	150	110
d. Maximum Street Grade	10%	15%	22%
e. Maximum Cul-de-Sac Length in Feet:			
Single Fam. Dist.	1000	1000	1000
Multi-Fam. Dist.	500	500	500
f. Minimum Centerline Radii in Feet	250	175	150
g. Sidewalks (minimum width in feet)	4	4	4
k. The minimum distance between the face of the curb and the required sidewalk shall be three (3) feet.			
l. All Cul-de-sacs shall terminate in a circle with a radius of not less than 50 feet with a minimum pavement radius of 90 feet.			
m. All curbs and gutters installed in conformity with these regulations shall be minimum six (6) inch vertical face with one (1) foot of gutter, or an overall width of combined curb and gutter of eighteen (18) inches.			
n. All sidewalks installed in conformity with these regulations shall be along at least one (1) side of all local streets except no sidewalks shall be required on culs-de-sac 500 feet or less in length in single family subdivisions. Sidewalks shall be installed on both sides of all local streets within 2000 feet of a school.			

- o. Subdivisions along existing or dedicated or platted streets where rights-of-way to meet minimum standards. When subdivisions are adjacent to or include within their boundaries an expressway, major arterial street, minor arterial street or collector street, the subdivider shall be required to post a bond to insure the installation of improvements not in excess of local street standards all expense for roadway width in excess of local street standard will be borne by the City of Irondale. In the event that the City of Irondale has not appropriated its share of the roadway expense within five (5) years from the date that the subdivider shall have posted a bond or cash or certified or cashier's check or a certificate of deposit with the City of Irondale; the said bond shall be deemed to be terminated and the said cash or certified or cashier's check or certificate of deposit shall be returned to the subdivider by the City of Irondale.
- p. All driveways shall be installed in accordance with the provisions of the General City Code of the City of Irondale.
- q. All streets not classified as freeways, expressways, major arterials and minor arterials shall conform to the following intersection design standards:

MINIMUM INTERSECTION DESIGN STANDARDS

TOPOGRAPHIC GRADIENTS

	0-8%	8.1 - 15%	Over 15%
1. Clear Horizontal Sight Distance (Length along each approach leg)	90'	90'	90'
2. Vertical Alignment within 100 feet of the centerline of intersections	5%	5%	5%

3. The minimum center-line off-set of adjacent street intersections shall be as follows:

Local - Local	150 Feet
Local - Collector	150 Feet
Collector - Collector	200 Feet

r. Street alignment shall be designed to eliminate sharp curves and street jogs. Streets shall intersect at right angles if possible and in no case at an angle of 80 degrees.

s. Curb radii of collector and local streets shall be as follows:

Local - Local	25 Feet
Local - Collector	25 Feet
Collector - Collector	25 Feet

t. Streets shall be graded to a minimum line of seven (7) feet back of the curb line with a rise of not less than eight (8) inches nor more than fifteen (15) inches from the flow line of the gutter unless the topography in such as to make this prohibited.

u. The provisions of Article IV, Section 1 of the Subdivision Regulations shall be complied with provided, that the Subdivision Committee will have the authority to grant waivers requested but only if the Community Development Director and the City Engineer recommend in writing said waivers. Before granting any waivers of the provisions of Article IV, Section 1, the Subdivision Committee must have considered a report, in any, from the City Engineer regarding any waivers requested, provided such report from the City Engineer shall have been submitted to the City Clerk at least 24 hours prior to the scheduled Subdivision Committee meeting at which the request for waivers will be heard.

2. Street and Subdivision Names.

- a. Street names for all subdivision plats shall be subject to approval of the City Clerk.
- b. Subdivision names for plats shall be subject to the approval of the Planning Commission and shall not duplicate the name of any plat already recorded in Jefferson County.

3. Alleys, Easements, and Half Streets.

Alleys are not required in residential districts but may be required in commercial or industrial districts if it is determined by the Planning Commission that conditions necessitate alleys in any such district. In no case shall alleys be less than 20 feet in width with curb radii at street intersections of at least 15 feet.

Easements shall be not less than ten (10) feet in width except in cases of double tiered lots where a width of seven and one-half (7 1/2) feet from each tier will be permitted. Where there exists a storm water ditch, creek or any other such watercourse, the easement shall be of sufficient width that such watercourse may be installed and maintained efficiently. The location of any storm water ditch, creek, or other such watercourse shall not be changed without the approval of the Planning Commission upon recommendation of the City Clerk and the City Engineer.

Half streets will not be permitted except in such cases where there exists a half street contiguous thereto.

4. Storm Water Drainage and Flooded Areas

- a. All Subdivisions shall be provided with adequate storm sewers. Cases where the size of such storm sewer would make the cost prohibitive in relation to the value of the land shall be planned and shown in dotted lines for future development and shall be excluded from the proposed subdivision until properly designed and funded. All storm drainage systems shall be designed on a minimum storm event of 25 year return and 24 hour duration, as required to be in harmony with up



- and downstream existing and planned conditions, or as required by the City Engineer.
- b. Lakes, ponds, creeks and similar areas will be accepted for maintenance only if sufficient land is dedicated as a public recreation area or park or if such area constitutes a necessary part of the drainage control system. Such area must be approved by the Park and Recreation Board and accepted by the City Council.
  - c. Areas subject to periodic flooding caused by poor drainage facilities will not be accepted by the Planning Commission unless the Subdivider makes necessary provisions to eliminate such flooding.

#### 5. Platting Requirements.

##### a. Blocks:

1. Blocks shall be laid out with special attention given to the type of use contemplated.
2. Length of blocks shall be from five hundred to thirteen hundred (500 to 1300) feet.
3. Width of blocks shall be from two hundred fifty to four hundred (250-400) feet in order to permit double tiered lots.
4. Blocks with lots having double frontage on streets shall be avoided.
5. The forgoing dimensions may be adjusted by the Planning Commission where the type of use or nature of the topography requires such modification.

##### b. Lots:

1. Lot sizes, shapes and locations shall be made with due regard to topographic conditions, contemplated use, and the surrounding area. A resubdivision, or a subdivision in an area already subdivided, shall improve, rather than detract from, the surrounding neighborhood.
2. Where easements for public utilities storm or sanitary sewers are contemplated, the lot lines shall be located in such a manner as to facilitate the construction of such improvements and the maintenance thereof.

3. Lot areas and widths shall meet or exceed minimum zoning and health requirements in the area in which the property is located, but the Planning Commission may choose greater requirements if it finds that a proposed subdivision, through meeting minimum zoning requirements, would tend to depreciate the value of surrounding or adjacent properties or would impose an undue burden on the City in furnishing municipal services to the area.
4. Corner lots shall be made larger than interior lots and shall provide at least the same minimum setback on the side as required on the front by the zoning ordinances.
5. Lot lines shall be substantially at right angles to the streets except on curves where they shall be radial. Where the distance between rear lot corners on double tiered lots would be less than ten (10) feet the radial lines shall be deviated so that the corners will be the same.

6. Public Areas.

- a. In all subdivisions suitable open spaces may be required to be set aside for park and recreation areas for acquisition by the Irondale Park and Recreation Board.

ARTICLE V. REQUIRED IMPROVEMENTS: BOND

1. Improvements.

Prior to the approval of the Final Plat the Subdivider shall have installed or constructed the following improvements, or posted bond as provided for in Section 2 of this Article:

- a. All streets shall have been designed and constructed in conformity with the requirements set out in Article IV.
- b. On both sides of each street there shall have been constructed a standard curb (with face no less than six (6) inches in height) and gutter, and a minimum roadway as prescribed in Section 1 (f) of Article IV.
- c. On all streets, including side streets and alleys, a suitable hard surfaced permanent type of pavement shall be constructed, meeting the requirements of the City of Irondale Standard Construction Specifications.
- d. Water, gas and sanitary sewer mains shall have been constructed prior to installation of paving with all mains being extended and all lots having sufficient stubouts to insure that subsequent cutting of pavement is avoided. Where septic tanks are necessary, sanitary sewers shall also be installed and capped until such time as connection may be had with a sanitary sewer system.
- e. Sidewalks shall have been constructed, if deemed essential for public safety by the Planning Commission and the City Engineer.
- f. Adequate storm sewers shall have been constructed, subject to the provisions of Article IV, Section 4 (a).
- g. Subdividers shall have installed or paid for street signs and street lights approved by and at points designated by the City Engineer.

2. Bond and Surety: Amount and Release.

- a. "In the event it is decided by the Planning Commission that the requirements set out in Section 1 of this Article need not immediately be met by the Subdivider, the requirements may be modified by the Subdivider as authorized by the Planning Commission. The requirements may be modified by the execution of an agreement between the City and the Subdivider that such improvements shall be installed and constructed within a reasonable and specified length of time. Bond shall be required to insure the fulfillment of such agreement and shall be in cash, by certified or cashier's check, acceptable certificates of deposit approved by the City Engineer, or made by a surety company authorized to do business in the State of Alabama."
- b. Such bond shall not exceed one hundred-fifteen per cent (115%) of the estimated cost of the improvements. The surety shall not be released from said bond except by a release in writing from the City Engineer.

3. Maintenance Bond.

- a. In any case in which the City Engineer may have reasonable doubt concerning the stability or proper construction of any improvement required herein upon his recommendation the Council may require a maintenance bond for ten (10) years for street construction maintenance and one (1) year for sewer lines and facilities. This bond shall be in cash or be made by a Surety Company authorized to do business in the State of Alabama.
- b. The City Engineer shall secure from all developers a letter or statement in which said developer shall agree to maintain the backfill and any improvements located thereon or therein of any ditch which has been dug in connection with the installation of such improvements and such letter or statement shall be binding on the developer for any period of one (1) year after acceptance of such improvements by the City of Irondale.

## ARTICLE VI. VARIANCES

### 1. Modification, Variances, and Waivers

If it be determined that strict compliance with these regulations would result in extraordinary hardship to the Subdivider due to unusual topography or conditions beyond the control of the Subdivider, then the Planning Commission may modify, vary or waive such requirements provided that such modification, variance, or waiver will not nullify the intent or purpose of these Subdivision Regulations, and provided further that such modification, variance, or waiver and the reason therefor shall be entered upon the minutes of the Planning Commission.

### 2. Conditions of, and Applications for Variances.

- a. In granting modifications, variances or waivers, the Planning Commission may attach such other reasonable conditions as will, in its judgement, justify such modifications, variances or waivers and still maintain substantially the objectives of these Regulations.
- b. Each and every modification, variance, or waiver of these Subdivision Regulations sought by a Subdivider shall be specifically applied for, in the numerical order of the Subdivision Regulations, in writing by the Subdivider on forms supplied by the City Clerk who shall then forward copy of said application to the City Engineer immediately following the passage of the fifteenth (15th) day prior to a regularly scheduled meeting of the Planning Commission. Any condition shown on the Preliminary or Final Plat (or on engineering plans or data called for by Section 5 of Article II) which would require a modification, variance, or waiver, shall constitute a ground for disapproval of the preliminary or Final Plat unless such special application for a modification, variance, or waiver is made.

ARTICLE VII. VACATION OF PUBLIC LANDS

1. Applications.

- a. Applicants seeking the recommendations of the Planning Commission as to a proposed vacation of public streets, alleys, ways, parks, or other lands, shall apply as though seeking approval of a subdivision, paying the Preliminary Plat fee, but submitting only five (5) copies of a Vicinity Sketch showing the public lands proposed to be vacated.
- b. Applicants may, at the time of submission of the Vicinity Sketch, also submit a Final Plat and five (5) copies thereof, showing the old property lines erased and new property lines as proposed to be established, so that the approval of said Final Plat might be expedited.
- c. Neither the City of Irondale, nor any officers, agents, or employees of the City acting in his or her official capacity, nor any agency of the City shall be required to pay a fee under this Article.

2. Investigation and Recommendation.

- a. Copies of Vicinity Sketches and Plats shall be distributed by the Planning Commission as provided in the case of regular subdivision applications, and written recommendations, if any, submitted to the Planning Commission.
- b. Upon hearing the application, the Planning Commission shall make its recommendations to the City Council as to whether said proposed vacation is in the best interest of the City. As this is only a recommendations, the applicant may then prepare the proper Declaration of Vacation and Resolution of Assent for submission to the City through the office of the City Engineer, and shall meet all statutory requirements concerning vacation of lands.

3. Final Plat of Resubdivision.

- a. As the effect of vacating public ways establishes new property lines of abutting properties in the center of such vacated ways, the applicant shall, within a reasonable time after the passage of the resolution assenting to the vacation thereof by the Council, submit a Final Plat erasing old property lines and establishing new ones for the approval of the Planning Commission.
- b. Said Final Plat shall show the vacated land in dotted lines, with reference to the Deed Book and page where the instruments of vacation are recorded. The Final Plat shall comply with all other applicable requirements of the Subdivision Regulations.

ARTICLE VIII. CONDOMINIUM, UNIT AND PLANNED  
DEVELOPMENT PROJECT

1. Approval Required.

No building or structure, for any unit, condominium, or planned development project shall be erected unless there is first secured approval of said project by the Irondale Planning Commission as provided in these Regulations.

2. Application (Required Evidence):

The application for a cooperative, unit, condominium, or planned development project, as provided herein, shall be made to the Irondale Planning Commission in triplicate, on forms furnished by said Commission. Such application shall be accompanied by:

- a. Legal Description: The legal description of the property involved, with legal description of each proposed unit of condominium, or planned development ownership and the legal description of the common areas, together with the existing zoning.
- b. Architectural Plans:
  1. Preliminary Approval: Three (3) sets of Preliminary Architectural Plans drawn to scale, fully dimensioned and keyed to the legal descriptions, including site development plans, front elevation, skeleton elevations cross sections showing all units and sizes thereof, typical separation of units or unit ownership, common areas, location of all utilities and the proposed use for buildings and structures of the project or parts thereof in compliance with the existing zoning and bearing the approval of the Building Inspector of the City of the City of Irondale.
  2. Final Approval: Three (3) sets of complete architectural plans drawn to scale, fully dimensioned, keyed to the legal descriptions, together with elevations, plans of each floor of the building, cross sections showing all dimensions and all units, separation of units or unit ownership, common areas, location of



all utilities, and the proposed use for all buildings and structures of all utilities, and the the project and parts thereof in compliance with the existing zoning and bearing the approval of the Building Inspector of the City of Irondale.

- c. Surveyors' Certificate: Three (3) sets of a survey drawn to scale and fully dimensioned showing the size of and the location of the existing and proposed structures on the said land together with the dimensions of all yards, parking spaces and open spaces, and showing all common areas of the project and certified as to the accuracy and validity by a Surveyor.
- d. Ground Plans: Three (3) copies of complete plans drawn to scale and fully dimensioned showing all roads, playing grounds, recreational areas, sidewalks, area lighting, parking, utilities, curbing and other facilities; and showing the relationship of the various buildings, structures, and open spaces to each other.
- e. Plans for Entire Area: If the said project is a portion of a larger holding intended for subsequent development, three (3) copies of such plans shall be submitted indicating the development of the entire area.
- f. Plat Requirements: The plat requirements for preliminary and final approval shall be as established in Article III of the Subdivision Regulations. The plat shall show all land of the condominium development resurveyed into one lot.
- g. Declaration Restrictions & Development Deed Requirements: Three (3) copies of the proposed condominium, unit and/or Planned Development Deed and the proposed Declaration Restrictions of said project, which shall include the following:
  - 1. Common Area Easement: Easements shall be provided for the use of the common area which permit only such developments as are consistent with the designated uses of the common area and which explicitly prohibit other uses.
  - 2. Maintenance: A declaration as to the maintenance of the common area as defined herein, shall define the intent and

limitations intended and shall include the establishment by the developer of a separate account, in a local financial institution, designated for the faithful performance of those allegations and further that the maintenance funds paid by the individual unit owners shall accumulate in this fund for this purpose.

3. Perpetual Deed and Restrictions: The Deeds and Restrictions shall be recorded and shall run with the land.
  4. Airspace Ownership: Deeds and Declarations of Restrictions shall provide that whenever the building settles or changes locations, the ownership of said airspace stipulated on the recorded deeds and plans, shall automatically shift in location so as to accommodate the natural settlement or changing location of a building or apartment unit.
- h. Ability and Intent to Construct: Evidence satisfactory to the Planning Commission of the ability and intention of the applicant to proceed with actual construction work in accordance with said plans within twelve (12) months after the effective date of such approval, and fully complete same.
- i. Application in Conjunction With Others: A condominium project application may be submitted in conjunction with Planned Unit or Development, and may be treated together.

### 3. Filing Fees:

The Planning Commission shall charge and collect a fee of \$50.00 for the filing of each condominium project application, in addition to regular subdivision fees, and said charge being due and payable at the time of filing such application.

### 4. Filed As A Subdivision:

The Developer shall subdivide the property into units and common areas and condominium, planned unit or planned development projects will be filed as a subdivision in a manner as prescribed in Article I through VII of these Subdivision Regulations for the Preliminary Plats,

Vicinity Sketches, Final Plats. Upon the recording of the final plat conveyances may be made of parcels shown on said plat and plans by Lot and Block Number, parcel and unit number or by such other designation as may be shown on such map and plans.

#### PLATS AND SKETCHES

- a. Plats and Sketches: Preliminary Plats, Vicinity Sketches and Final Plats shall be filed with the same information as required on any other subdivision.
- b. Reviewed by Commission: The maps will be reviewed in the same manner as any other subdivision.
- c. "As-Built", Site and Architectural Plans of Units to be Recorded: The final plans of site and architectural developments together with legal description of the property, and each proposed unit and of each common area shall be recorded in the Office of Probate Court Jefferson County, Alabama.
- d. Amendments to Recorded Map and Plans: Whenever the subdivision map and plans as required herein have been recorded and there are intended changes in size, shape or location of buildings and/or units, then an amendment to the recorded map shall be made in accordance with the same procedure as set forth in the filing and recording of the original application.

#### 5. Hearing (Notice of):

Upon receipt in the proper form of any such application, the Planning Commission shall hold a public hearing thereon following the procedure as established in Article II of these Subdivision Regulations. Notice of the time and place of hearing shall be sent to each owner of property within a minimum distance of three hundred (300) feet of the exterior boundary of the lot or parcel of land under the same ownership and/or as described in such application, or if deemed advisable, the Planning Commission shall cause said notice to be published in a newspaper of general circulation in the City at least ten (10) days prior to the meeting. For the purpose of this section "Property Owner" shall mean that owner shown upon the latest assessment rolls of the County.

6. Hearing Required:

If the application does not conform to all requirements of the Zoning Ordinance of the City of Irondale and all the Subdivision Regulations, heretofore, or hereinafter, enacted, a public hearing shall be held thereon prior to granting or denying either a zone change, a variance, a conditional use or waiver of subdivision improvement requirements. Prior to said public hearing the City of Irondale shall make an investigation thereof and shall present to the Planning Commission precisely the manner in which the condominium project application varies with the Land Use or Subdivision Ordinances, and his recommendation thereon.

7. Commission Records:

From the time of filing such application, the application, together with all plans and data submitted, shall become a part of the permanent records of the Planning Commission and shall be made available for public inspection in said Commission's office, the City Clerks office of the City of Irondale.

8. Investigation of Facts:

The Planning Commission shall cause to be made by its own members or the Community Development Director as its agent when assigned for the purpose, an investigation of the facts bearing on any application for a condominium project sufficient to assure that the action taken on each application is sufficient to assure the intent of these Regulations.

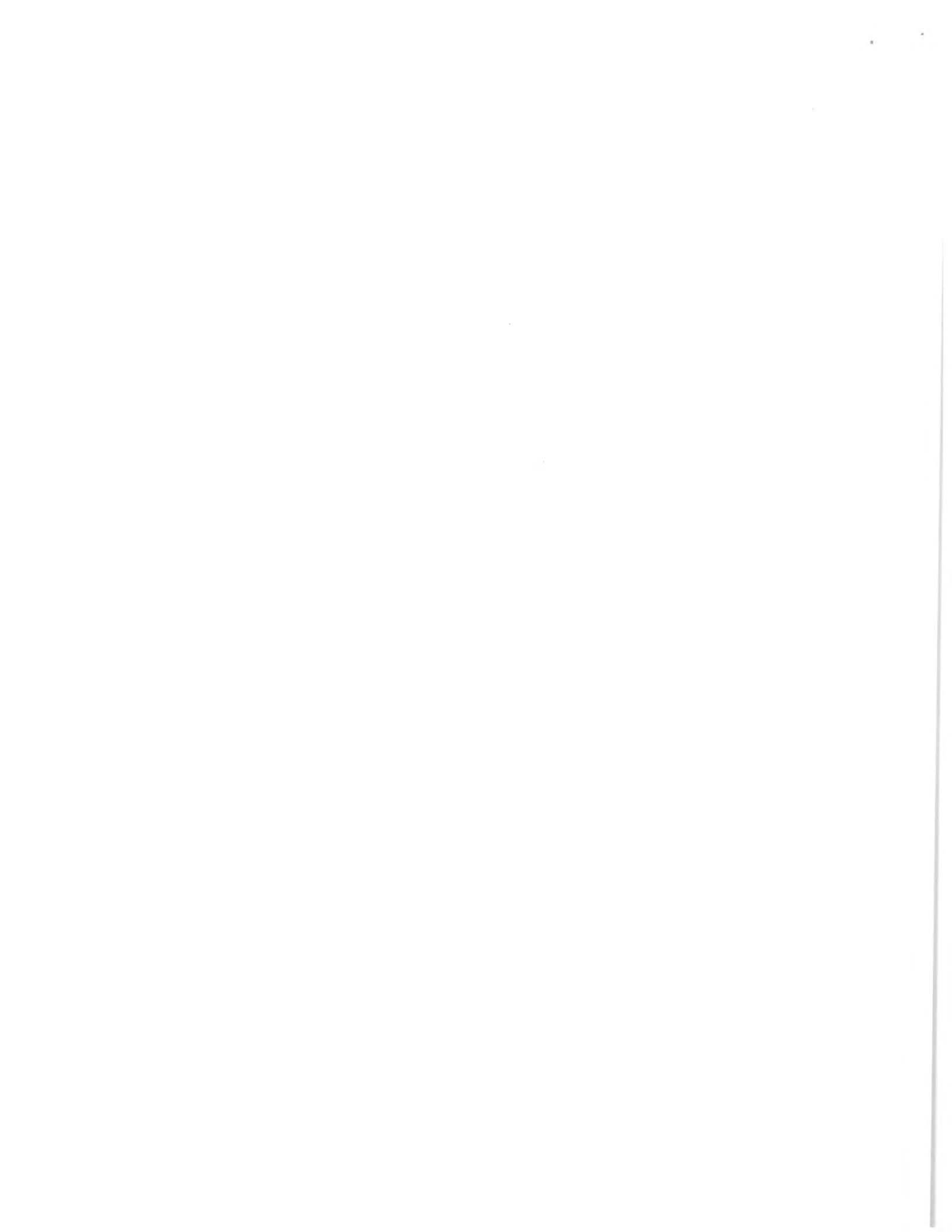
9. Action on Applications:

If, in the opinion of the Planning Commission, the necessary facts and conditions apply, so that in fact there is substantial adherence to the aims of this Article and the Subdivision Regulations in general to the particular property referred to in the application for planned unit, condominium, or planned development project, and that the same comes within the purview of the Commission and sound planning, it may approve same in whole or in part. If, however, such facts and conditions do not prevail nor apply, or if granting of the said

permits will adversely affect the property of the persons in the vicinity of the applicant's property, or for any other valid reason, the Commission may disapprove the application as submitted.

10. Expiration of Permit:

Each Permit or Conditional Permit authorized under the provisions of this Chapter which is not actually established or the actual construction commenced on the buildings or structures involved within twelve (12) months from the date of its authorization by the Planning Commission, shall become null and void. In the event some construction work is involved, it must actually commence within the stated period and must be diligently prosecuted to completion.



Sec. 5:24. - Tree and landscape ordinance.

Section 1. *Ordinance authority.*

- 1.1 The planning and zoning commission of the city, under the authority of Ordinance No. 1-0598, zoning ordinance of the city, has authority in all zoning districts as pertains to the regulation and requirements of landscaping and buffer areas.
- 1.2 The ordinance requires buffer/greenbelts in many of the zoning districts and, under article V, special use regulations, has the authority to cause or require additional plans and landscaping beyond the normal greenbelt requirements.

Section 2. *Review.*

The planning and zoning commission may refer all landscape projects that, in their opinion, require additional review to the design review committee established under Section IV of Ordinance No. 99-72 (section 5:23 of this article) and amendment Ordinance No. 2000-13. One member of the tree commission and the city arborist will also serve on the design review committee with respect to tree and landscape ordinance compliance. The design review committee will review the submitted plans and make written comments and recommendations with respect to compliance with this tree and landscape ordinance and may make recommendations for changes to be considered by the planning and zoning commission for their final decision.

Section 3. *Purpose.*

It is the purpose of this ordinance to promote and protect the public health, safety and general welfare by providing for the regulation of the planting, maintenance and removal of trees, shrubs and other plants in public street or highway rights-of-way, parks and other city-owned property as well as those on private property which, in the opinion of the city arborist, constitute a threat to life or property. By such regulation it is intended that the preservation, conservation and replacement of trees and other plants shall be practiced to the fullest practicable extent.

Section 4. *Applicability.*

The provisions of this ordinance shall apply to all properties within the city;

- 4.1 When new improvements require the submission to and approval of a site plan or subdivision plan by the planning and zoning commission.
- 4.2 When clearing and grading operations are planned in preparation for site development or modification.
- 4.3 When requests are made to cut or remove trees or shrubs from public property.
- 4.4 When, in the opinion of the city arborist, a tree on private property fits the definition of a problem tree.
- 4.5 When an individual citizen or property owner requests to be allowed to cut trees or shrubbery on or over public property.
- 4.6 When a major public improvement project includes new planting or the removal of existing plants.

Section 5. *Definitions.*

Except as listed below, words used herein shall bear the meanings given to them in the Random House Dictionary of the English Language, Second Edition, Unabridged.

*Buffer:* Space between adjacent properties either left in natural vegetation or planted in trees and or other vegetation.

*Caliper:* The diameter the trunk of a tree measured 12 inches above the ground.

*City:* The City of Irondale, Alabama, its agents and agencies.

*City arborist:* A person so certified by the Jefferson County Personnel Board and approved by the city council who is certified as such by the International Society of Arboriculture or holds a degree from an accredited school of forestry or in absence of a qualified employee, the person temporarily appointed by the mayor to discharge the duties thereof.

*City-owned property:* Rights-of-way and other property owned by the city.

*Crown:* The portion of a tree consisting of the branches whose tips extend farthest from the trunk and all branches above that level.

*DBH:* Diameter at breast height, a standard measure of tree size. It is the diameter of the trunk measured four and one-half feet above the ground. If a tree splits into two or more trunks below four and one-half feet, the trunk is measured where it is narrowest below the split.

*Dripline:* A vertical line extending from the outer extremities of a tree's crown down to the ground.

*Landmark tree:* A tree so designated by the historical commission, the city, the county, the state or the federal government, because of species rarity, old age, abnormality, scenic enhancement, association with a historical person or event or some other condition making the tree unique.

*Large tree:* A tree attaining a mature height of 15 feet or more.

*Private tree:* A tree growing on privately owned property.

*Problem tree:* A tree that is potentially unsafe due to a structural defect and constitutes a threat to public property or public safety.

*Public tree:* A tree growing in a park, in the right-of-way of a public street, highway or on other city-owned property.

*Small tree:* A tree attaining a mature height of less than 15 feet.

*Species list:* The city's list of plant species approved for planting in the city. (See subsection 8.2)

*Topping:* The severe cutting back of the trunk and/or limbs within a tree's crown, disfiguring the tree.

*Tree:* A self-supporting woody plant, usually having a single woody trunk and a potential DBH of two inches or more.

*Tree cover:* The area directly beneath the crown and within the dripline of the tree.

*Tree lawn:* The space between a street or highway right-of-way and the curblineline or other edge of paving.

## Section 6. *Licensing and permitted activities.*

6.1 *Licensing.* Any person or company paid a fee for the business of planting, cutting, trimming, pruning, removing, or otherwise modifying trees within the city shall obtain an appropriately classified business license.

6.2 *Permit required for tree removal.* No person shall remove, cut above ground, or otherwise disturb any tree within city-owned property without city approval and then procuring the necessary permit from the city clerk. This section is not applicable to removal of trees for site development and subdivision projects approved for construction by the city. The city shall determine if trees or shrubs on city-owned property are problem trees after examination by the city arborist and, if so determined, to cause such trees or shrubs to be removed.

6.3 Trees may be removed for the following reasons:

1. Problem trees or trees that are deteriorated.
2. Diseased or infectious trees and trees in decline.
3. Trees or their root systems causing visible damage to structures, and or areas used for pedestrian and vehicle traffic.



4. Trees within utility easements, which can not be properly pruned by the local utility company as determined by the city arborist.
  5. Trees to be removed, cut, pruned or disturbed as detailed on plans approved by the planning and zoning commission and after all other applicable permits for construction have been issued. Example: Clearing of existing right-of-way to provide proper sight distance at a new proposed street intersection.
- 6.4 *Application.* Applications for permits must be made at the office of the city clerk at least five business days in advance of the time the work is to be done on forms provided by the city. The city clerk will forward the permit application to the city arborist for his review and recommendations. The permit will contain a date of expiration and the work shall be completed in the time allowed on the permit. The city arborist will inspect the site and tree(s) and forward the approval application to the mayor for his approval. The city arborist may void the permit if any of the conditions of the permit as granted are violated. The applicant shall notify the city arborist upon completion of the work and request a final inspection and release from the terms of the permit.
- 6.5 *Utility companies.* Utility companies or their subcontractors engaged in removal or pruning of trees on city-owned property for the purpose of line clearance should notify the city arborist as to the location and scope of the work they will be performing. The city arborist will work with the companies to enhance the work for the best interests of the city to maintain an acceptable visual appearance and promote proper growth in the future. Rather than allow the topping of trees, the utility company may be required to completely remove said trees, including the stump to a minimum of six inches below the low point of the surrounding grade adjacent to the stump and to plant a replacement small tree or shrub as approved by the city arborist.
- 6.6 *Request for new tree plantings.* Requests from private citizens for new trees to be planted near their property and located in the street right-of-way or on the other public property will be accommodated in accordance with planting priorities set by the city council and reviewed and recommended for approval by the city arborist. The city arborist may request the design review committee, the beautification advisory committee and/or the tree commission for their review and recommendations.
- 6.7 *Excavation within street rights-of-way.* Excavation within the street right-of-way for the purpose of removing or planting trees by a contractor or individual shall not be undertaken without notification to and approval by the city. All necessary bonding requirements and street construction procedures must be followed. An underground utility request shall also be made to the Alabama Line Location Service or other approved line locator service which shall locate and mark all utility lines before the individual or contractor commences excavation.
- 6.8 *Regulated activities.* Unless specifically authorized in writing by the city, no person shall damage, cut, carve, transplant or remove any tree, shrub, or other plant materials on city-owned property, except for city employees under the supervision of the city arborist and who are performing their daily duties as assigned by the city arborist relating to landscaping and work incidental thereto. No person or other entity shall attach any rope, wire, nails, advertising posters or other similar objects to any tree or shrub in the public rights-of-way or other city-owned property.
- 6.9 *Sight distances/obstruction of rights-of-way.* It shall be the duty of the property owner of any parcel bordering on a public street to ensure that trees and shrubs on their property are planted and pruned in a manner that will not obstruct free passage or the vision of vehicular or pedestrian traffic, sidewalks, traffic signs, or the proper lighting of street intersections or alleyways.
- 6.10 *Corrective action.* Any person or other entity failing to comply with the provisions of this ordinance shall be notified in writing by the city attorney to take corrective action within ten days of the written notice. Such notice will be delivered by registered mail or hand delivered by an official of the city to the owner of record of the subject property. When a person or other entity to whom the notice was delivered shall fail to comply within the specified time, the city shall take

appropriate action to correct the specified problem and all the cost incurred by the city to correct the problem shall be assessed to that person or other entity.

- 6.11 *Emergency work.* Any emergency work activity immediately necessary to protect life or property or to maintain safe access to any property in the event of a natural disaster shall be exempted from the provisions of this ordinance. The city arborist and/or the superintendent of public works shall be notified as soon as possible of the location and or locations of performed emergency work in order that the situation may be reviewed and proper guidance may be provided concerning public property, trees or shrubs involved in the emergency work.
- 6.12 *Penalties.* Any person, firm or corporation violating any of the provisions of this ordinance shall be guilty of a misdemeanor offense and shall be assessed the maximum fine provided for the destruction of public property.

#### Section 7. *Landscaping.*

Submittals for building permits for new subdivision and the development of commercial and industrial property, shall include landscape plans, designating all existing trees, showing trees and shrubs proposed for planting on city rights-of-way, at entrances and exits, in buffer areas, in parking lots and similar locations. Such plantings shall conform to the requirements set forth for buffers and greenbelts in the city's zoning ordinance (Ord. No. 1-0598).

#### Section 8. *Tree planting, maintenance and removal.*

- 8.1 *General:* No tree on public property shall be planted, removed, cut above the ground or otherwise damaged without prior written approval of the city arborist. All such operations shall comply with all provisions of this ordinance.
- 8.2 *Species:* All plants shall be selected from a list obtainable from the city clerk's office. Any other plants proposed for use in the city must be approved by the city arborist.
- 8.3 *Spacing:* Small trees shall be planted no closer together than thirty (30) feet; large trees, 40 feet unless a variance is granted by the city.
- 8.4 *Utility lines:* Only small trees shall be planted under or within ten lateral feet of overhead utility lines. No trees shall be planted directly over or within five lateral feet of buried utility lines.
- 8.5 *Distance from curbs and sidewalks:* Small trees shall be planted no closer to curbs or sidewalks than four feet; large trees no closer than six feet.
- 8.6 *Topping:* The topping of any tree is strictly forbidden except in rare cases approved in writing by the city arborist.
- 8.7 *Clearing:* All clearing of land shall be held to the minimum amount necessary to accomplish the purpose for which it is done. Clearing and all other land disturbance shall be carried out in strict compliance with the provisions of all applicable city ordinances and best management practices.

#### Section 9. *Tree protection.*

- 9.1 *Disease or infestation:* Upon discovery within the city limits of any disease or pestilence which will endanger the growth or health of trees, whether on public or private property, the city shall immediately cause written notice to be served upon the owner of the property where evidence of the problem is observed. The notice shall require said owner, whether a public or private entity, to eradicate, remove or otherwise control or abate such condition within a reasonable time as set forth in the notice. Failure to comply will be just cause for the city to take appropriate action and the cost incurred by the city shall be assessed against the property owner.
- 9.2 Trees to be retained on a building or development site shall be protected by the use of barriers, by preventing siltation, grading or the burying of utility lines within the trees' driplines and by refraining from any activity that may result in damage to the tree(s).

9.3 Landmark trees shall be diligently protected from any and all activities which may result in their being damaged in any manner.

Section 10. *Nuisance trees.*

The city may declare to be a public nuisance any tree, shrub, plant or plant part which:

- (a) Is a problem tree or is diseased or infected as described in 9.1 above, or
- (b) Is dead or dying and will fall onto public property, or
- (c) Is obstructing the free passage of pedestrians or vehicles; obstructing the view of traffic lights or signs, or is interfering with the proper lighting of a street or sidewalk and/or poses a threat to safety in any manner, as determined by the chief of police or his designee, and/or qualified engineer engaged by the city.

The city shall notify in writing the owner of any such public nuisance, requiring said owner to remove the public nuisance within a reasonable time as set forth in the notice. Upon the failure of the owner to comply with the terms of the notice, the city may cause the required removal to be done and the cost incurred by the city shall be assessed against the property owner.

Section 11. *Authority of the city arborist.*

11.1 *Rules:* The city arborist shall have the authority and the power to enforce rules and regulations approved by the city council and specifications concerning the trimming, spraying, removal, planting, pruning, maintenance and protection of trees, shrubs, vines, hedges and other plants on any public property within the city.

11.2 *Master plan:* The city arborist shall recommend rules, regulations and a master street tree plan to be adopted by the city council and which the city council may amend or add thereto from time to time as circumstances make it advisable to do so. Such plan shall specify by species and other particulars the types, placement and spacing of trees to be planted on the streets and other public property of the city. On and after the date of adoption by the city of the master street tree plan, all planting shall conform thereto.

(Ord. No. 00-12, §§ 1—11, 5-2-2000)

**Editor's note**— Ord. No. 00-12, §§ 1—11, adopted May 2, 2000, did not specifically amend the Code; hence, inclusion herein as § 5:24 was at the discretion of the editor.

## Chapter 7 - FLOOD DAMAGE PREVENTION<sup>[1]</sup>

### Footnotes:

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**Cross reference**— Planning and zoning commission, § 2-61 et seq.; buildings and building regulations, ch. 4; stormwater detention and drainage, ch. 15; water, ch. 18; zoning, app. A.

### ARTICLE I. - IN GENERAL

#### Sec. 7-1. - Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

*Addition (to an existing building)* means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition, which is connected by a fire wall or is separated by an independent perimeter load-bearing wall shall be considered new construction.

*Appeal* means a request for a review of the building inspector's or city engineer's interpretation of any provision of this chapter.

*Area of shallow flooding* means a designated AO or AH zone on a community's flood insurance rate map (FIRM) with base flood depths from one to three feet, and/or where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

*Area of special flood hazard* is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. In the absence of official designation by the Federal Emergency Management Agency, areas of special flood hazard shall be those designated by the local community and referenced in section 7-7.

*Base flood* means the flood having a one percent chance of being equaled or exceeded in any given year.

*Basement* means that portion of a building having its floor subgrade (below ground level) on all sides.

*Building* means any structure built for support, shelter, or enclosure for any occupancy or storage.

*Development* means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, and permanent storage of equipment or materials.

*Elevated building* means a non-basement building built to have the lowest floor of the lowest enclosed area elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns, piers, or shear walls adequately anchored so as not to impair the structural integrity of the building during a base flood event.

*Existing Construction.* Any structure for which the "start of construction" commenced before March 17, 1987.

*Existing manufactured home park or subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and final site grading or the pouring of concrete pads) is completed before March 17, 1987.

*Expansion to an existing manufactured home park or subdivision* means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

*Flood or Flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

*Flood hazard boundary map (FHBM)* means an official map of a community, issued by the Federal Insurance Administration, where the boundaries of areas of special flood hazard have been defined as Zone A.

*Flood insurance rate map (FIRM)* means an official map of a community, issued by the Federal Insurance Administration, delineating the areas of special flood hazard and/or risk premium zones applicable to the community.

*Flood insurance study* means the official report by the Federal Insurance Administration evaluating flood hazards and containing flood profiles and water surface elevations of the base flood.

*Floodplain* means any land area susceptible to flooding.

*Floodway (regulatory floodway)* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

*Functionally dependent facility* means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

*Highest adjacent grade* means the highest natural elevation of the ground surface, prior to construction, adjacent to the proposed walls of a structure.

*Historic structure* means any structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the secretary of the interior as meeting the requirements for individual listing on the national register;
- (2) Certified or preliminarily determined by the secretary of the interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the secretary to qualify as a registered historic district;
- (3) Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the secretary of the interior; or
- (4) Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
  - a. By an approved state program as determined by the secretary of the interior, or
  - b. Directly by the secretary of the interior in states without approved programs.

*Levee* means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

*Levee system* means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

*Lowest floor* means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of other provisions of this code.

*Manufactured home* means a building, transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

*Mean sea level* means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this chapter, the term is synonymous with National Geodetic Vertical Datum (NGVD) of 1929 or other datum.

*National Geodetic Vertical Datum (NGVD)* as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

*New construction* means any structure (see definition) for which the start of construction commenced after March 17, 1987, and includes any subsequent improvements to such structures.

*New manufactured home park or subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after March 17, 1987.

*Repetitive Loss* means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

*Recreational vehicle* means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred square feet or less when measured at the largest horizontal projection;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

*Remedy a violation* means to bring the structure or other development into compliance with state or local flood plain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

*Section 1316:* No new flood insurance shall be provided for any property which the administrator finds has been declared by a duly constituted state or local zoning authority or other authorized public body, to be in violation of state or local laws, regulations or ordinances which are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.

*Start of construction* means the date the development permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of the structure such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation, and includes the placement of a manufactured home on a foundation. (Permanent construction does not include initial land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of buildings appurtenant to the permitted structure, such as garages or sheds not occupied as dwelling units or part of the main structure. (Note: accessory structures are not exempt from any ordinance requirements) For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling,

floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

*Structure* means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank.

*Substantial damage* means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Substantial damage also means flood related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

*Substantial improvement* means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred repetitive loss" or substantial damage, regardless of the actual repair work performed. The market value of the building should be (1) the appraised value of the structure prior to the start of the initial repair or improvement, or (2) in the case of damage, the value of the structure prior to the damage occurring. This term includes structures which have incurred "substantial damage", regardless of the actual amount of repair work performed.

For the purpose of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. The term does not, however, include either: (1) any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or; (2) any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

*Substantially improved existing manufactured home parks or subdivisions* is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

*Variance* is a grant of relief from the requirements of this chapter which permits construction in a manner otherwise prohibited by this chapter.

*Violation* means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in the Code of Federal Regulations (CFR) § 44, Sec. 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) and corresponding parts of this chapter is presumed to be in violation until such time as that documentation is provided.

(Ord. No. 99-2, Art. 6, 2-2-99; Ord. No. 2006-36, Art. 6, 9-19-06)

Sec. 7-2. - Statutory authorization.

The legislature of the state has in title 11, chapter 19, sections 1—24, chapter 45, sections 1—11, chapter 52, sections 1—84, and title 41, chapter 9, section 166 of the Code of Alabama, 1975, authorized local government units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council does hereby ordain this chapter.

(Ord. No. 99-2, Art. 1, § A, 2-2-99; Ord. No. 2006-36, Art. 1, § A, 9-19-06)

Sec. 7-3. - Findings of fact.

- (a) The flood hazard areas of the city are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood relief and protection, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- (b) These flood losses are caused by the occupancy in flood hazard areas of uses vulnerable to floods, which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages, and by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities.

(Ord. No. 99-2, Art. 1, § B, 2-2-99; Ord. No. 2006-36, Art. 1, § B, 9-19-06)

Sec. 7-4. - Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

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

(Ord. No. 99-2, Art. 1, § C, 2-2-99; Ord. No. 2006-36, Art. 1, § C, 9-19-06)

Sec. 7-5. - Objectives.

The objectives of this chapter are:

- (1) To protect human life and health;
- (2) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
- (3) To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas;
- (4) To minimize expenditure of public money for costly flood control projects;
- (5) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (6) To minimize prolonged business interruptions; and
- (7) To insure that potential home buyers are notified that property is in a flood area.

(Ord. No. 99-2, Art. 1, § D, 2-2-99; Ord. No. 2006-36, Art. 1, § D, 9-19-06)

Sec. 7-6. - Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazard within the jurisdiction of the city.



(Ord. No. 99-2, Art. 2, § A, 2-2-99; Ord. No. 2006-36, Art. 2, § A, 9-19-06)

Sec. 7-7. - Basis for area of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in its flood insurance study (FIS), dated September 29, 2006, with accompanying maps and other supporting data and any revision thereto, are adopted by reference and declared a part of this chapter. For those land areas acquired by a municipality through annexation, the current effective FIS and data for Jefferson County are hereby adopted by reference. Areas of special flood hazard may also include those areas known to have flooded historically or defined through standard engineering analysis by governmental agencies or private parties but not yet incorporated in a FIS.

(Ord. No. 99-2, Art. 2, § B, 2-2-99; Ord. No. 2006-36, Art. 2, § B, 9-19-06)

Sec. 7-8. - Establishment of development permit.

A development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities.

(Ord. No. 99-2, Art. 2, § C, 2-2-99; Ord. No. 2006-36, Art. 2, § C, 9-19-06)

Sec. 7-9. - Compliance.

No structure or land shall hereafter be located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations.

(Ord. No. 99-2, Art. 2, § D, 2-2-99; Ord. No. 2006-36, Art. 2, § D, 9-19-06)

Sec. 7-10. - Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing ordinance, easements, covenants, or deed restrictions. However, where this chapter and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. No. 99-2, Art. 2, § E, 2-2-99; Ord. No. 2006-36, Art. 2, § E, 9-19-06)

Sec. 7-11. - Interpretation.

In the interpretation and application of this chapter all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body, and; (3) deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. 99-2, Art. 2, § A, 2-2-99; Ord. No. 2006-36, Art. 2, § F, 9-19-06)

Sec. 7-12. - Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur; flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city or by any officer or employee

thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

(Ord. No. 99-2, Art. 2, § G, 2-2-99; Ord. No. 2006-36, Art. 2, § G, 9-19-06)

Sec. 7-13. - Penalties for violation.

Violation of the provisions of this chapter or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$500.00 or imprisoned for not more than 30 days, or both, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the city from taking such other lawful actions as is necessary to prevent or remedy any violation.

(Ord. No. 99-2, Art. 2, § H, 2-2-99; Ord. No. 2006-36, Art. 2, § H, 9-19-06)

Secs. 7-14—7-30. - Reserved.

## ARTICLE II. - ADMINISTRATION

Sec. 7-31. - Designation of ordinance administrator.

The city engineer is hereby appointed to administer and implement the provisions of this chapter.

(Ord. No. 99-2, Art. 3, § A, 2-2-99; Ord. No. 2006-36, Art. 3, § A, 9-19-06)

Sec. 7-32. - Permit procedures.

Application for a development permit shall be made to the city engineer (floodplain administrator) on forms furnished by the community prior to any development activities, and may include, but not be limited to the following: plans in duplicate drawn to scale showing the elevations of the area in question and the nature, location, dimensions, of existing or proposed structures, earthen fill placement, storage of materials or equipment, and drainage facilities.

Specifically, the following information is required:

(1) *Application stage.*

- a. Elevation in relation to mean sea level (or highest adjacent grade) of the regulatory lowest floor level, including basement, of all proposed structures;
- b. Elevation in relation to mean sea level to which any nonresidential structure will be flood-proofed;
- c. Design certification from a registered professional engineer or architect that any proposed nonresidential flood-proofed structure will meet the flood-proofing criteria of sections 7-52(2) and 7-53(2);
- d. Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development, and;

(2) *Construction stage.* For all new construction and substantial improvements, the permit holder shall provide to the administrator an as-built certification of the regulatory floor elevation or flood-proofing level using appropriate FEMA elevation or flood-proofing certificate immediately after the lowest floor or flood-proofing is completed. When flood-proofing is utilized for

nonresidential structures, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same.

Any work undertaken prior to submission of these certifications shall be at the permit holder's risk. The city engineer shall review the above referenced certification data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being allowed to proceed. Failure to submit certification or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

(Ord. No. 99-2, Art. 3, § B, 2-2-99; Ord. No. 2006-36, Art. 3, § B, 9-19-06)

Sec. 7-33. - Duties and responsibilities of the administrator.

Duties of the city engineer shall include, but shall not be limited to:

- (1) Review all development permits to assure that the permit requirements of this chapter have been satisfied;
- (2) Review proposed development to assure that all necessary permits have been received from governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. Require that copies of such permits be provided and maintained on file.
- (3) When base flood elevation data or floodway data have not been provided in accordance with section 7-7, then the city engineer shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other sources in order to administer the provisions of article III.
- (4) Verify and record the actual elevation in relation to mean sea level (or highest adjacent grade) of the regulatory floor level, including basement, of all new construction or substantially improved structures in accordance with section 7-32(2).
- (5) Verify and record the actual elevation, in relation to mean sea level to which any new or substantially improved structures have been flood-proofed, in accordance with sections 7-52(2) and 7-53(2).
- (6) When flood-proofing is utilized for a structure, the city engineer shall obtain certification of design criteria from a registered professional engineer or architect in accordance with section 7-32(1)c. and section 7-52(2) or section 7-53(2).
- (7) Notify adjacent communities and the state department of natural resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA), and the state department of economic and community affairs/office of water resources/NFIP state coordinator's office.
- (8) For any altered or relocated watercourse, submit engineering data/analysis within six months to the FEMA and state to ensure accuracy of community flood maps through the letter of map revision process. Assure flood carrying capacity of any altered or relocated watercourse is maintained.
- (9) Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the floodplain administrator shall make the necessary interpretation. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this chapter.
- (10) All records pertaining to the provisions of this chapter shall be maintained in the office of the floodplain administrator and shall be open for public inspection.

(Ord. No. 99-2, Art. 3, § C, 2-2-99; Ord. No. 2006-36, Art. 3, § C, 9-19-06)

Sec. 7-34. - Variance procedures.

- (a) The board of zoning adjustments, as established by the city council shall hear and decide requests for appeals or variance from the requirements of this chapter.
- (b) The board shall hear and decide appeals when it is alleged an error in any requirement, decision, or determination is made by the building inspector or city engineer in the enforcement or administration of this chapter.
- (c) Any person aggrieved by the decision of the board of zoning adjustments may appeal such decision to the circuit court or court of like jurisdiction, as provided in 11-52-81 of the Code of Alabama.
- (d) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum to preserve the historic character and design of the structure.
- (e) Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of this article are met, no reasonable alternative exists, and the development is protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.
- (f) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (g) In reviewing such requests, the board of zoning adjustments shall consider all technical evaluations, relevant factors, and all standards specified in this and other sections of this chapter.
- (h) Conditions for variances:
  - (1) A variance shall be issued only when there is:
    - a. A finding of good and sufficient cause;
    - b. A determination that failure to grant the variance would result in exceptional hardship; and
    - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
  - (2) The provisions of this chapter are minimum standards for flood loss reduction, therefore any deviation from the standards must be weighed carefully. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and, in the instance of an historic structure, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
  - (3) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation of the proposed lowest floor and stating that the cost of flood insurance will be commensurate with the increased risk to life and property resulting from the reduced lowest floor elevation.
  - (4) The city engineer shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency and the state department of economic and community affairs/office of water resources upon request.
- (i) Upon consideration of the factors listed above and the purposes of this chapter, the board of zoning adjustments may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

(Ord. No. 99-2, Art. 5, 2-2-99; Ord. No. 2006-36, Art. 5, 9-19-06)

Secs. 7-35—7-50. - Reserved.

### ARTICLE III. - PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 7-51. - General standards.

In all areas of special flood hazard the following provisions are required:

- (1) New construction and substantial improvements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure;
- (2) New construction and substantial improvements of existing structures shall be constructed with materials and utility equipment resistant to flood damage;
- (3) New construction and substantial improvements of existing structures shall be constructed by methods and practices that minimize flood damage;
- (4) Elevated buildings. All new construction or substantial improvements of existing structures that include any fully enclosed area located below the lowest floor formed by foundation and other exterior walls shall be designed so as to be an unfinished or flood-resistant enclosure. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters.
  - a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
    1. Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
    2. The bottom of all openings shall be no higher than one foot above grade; and,
    3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions.
  - b. So as not to violate the "lowest floor" criteria of this chapter, the unfinished or flood resistant enclosure shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area; and,
  - c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (5) All heating and air conditioning equipment and components, all electrical, ventilation, plumbing, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (6) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.
- (7) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- (8) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;
- (9) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding, and;
- (10) Any alteration, repair, reconstruction or improvement to a structure which is not compliant with the provisions of this chapter, shall be undertaken only if the nonconformity is not furthered, extended or replaced.

(Ord. No. 99-2, Art. 4, § B, 2-2-99; Ord. No. 2006-36, Art. 4, § A, 9-19-06)

Sec. 7-52. - Specific standards.

In all areas of special flood hazard designated as A1-30, AE, AH, A (with estimated BFE), the following provisions are required:

- (1) *New construction and substantial improvements.* Where base flood elevation data are available, new construction or substantial improvement of any structure or manufactured home shall have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 7-51(4), Elevated Buildings.
- (2) *Nonresidential construction.* New construction or the substantial improvement of any nonresidential structure located in A1-30, AE, or AH zones, may be flood-proofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be water tight to one foot above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and in section 7-33(6).
- (3) *Standards for manufactured homes and recreational vehicles.* Where base flood elevation data are available:
  - a. All manufactured homes placed or substantially improved on: (i) individual lots or parcels, (ii) in new or substantially improved manufactured home parks or subdivisions, (iii) in expansions to existing manufactured home park or subdivisions, or (iv) on a site in an existing manufactured home park or subdivision where a manufactured home has incurred substantial damage as the result of a flood, must have the lowest floor including basement elevated no lower than one foot above the base flood elevation.
  - b. Manufactured homes placed or substantially improved in an existing manufactured home park or subdivision may be elevated so that either:
    1. The lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation, or
    2. Where no base flood elevation exists, the manufactured home chassis and supporting equipment is supported by reinforced piers or other foundation elements of at least equivalent strength and is elevated to a maximum of 60 inches (five feet).
  - c. All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. (Refer: section 7-51)
  - d. All recreational vehicles placed on sites must either:
    1. Be on the site for fewer than 180 consecutive days, fully licensed and ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached structures or additions; or
    2. The recreational vehicle must meet all the requirements for new construction, including the anchoring and elevation requirements of subsection (3)a—c, above.

(Ord. No. 99-2, Art. 4, § B, 2-2-99; Ord. No. 2006-36, Art. 4, § B, 9-19-06)

Sec. 7-53. - Building standards for streams without established base flood elevations and/or floodway (A Zones).

Located within the areas of special flood hazard established in section 7-7, where streams exist but no base flood data have been provided (A zones), the following provisions apply:

- (1) When base flood elevation data or floodway data have not been provided in accordance with section 7-7, then the city engineer shall obtain, review, and reasonably utilize any scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of article III. Only if data are not available from these sources, then the following provisions (2) and (3) shall apply:
- (2) No encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or 25 feet, whichever is greater, measured from the top of the stream bank, unless certification by a registered professional engineer is provided demonstrating that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (3) All development in zone A must meet the requirements of section 7-51 and section 7-52(1)—(3).
- (4) In special flood hazard areas without base flood elevation data, new construction and substantial improvements of existing structures shall have the lowest floor of the lowest enclosed area (including basement) elevated no less than three feet above the highest adjacent grade at the building site. Also, in the absence of a base flood elevation, a manufactured home must also meet the elevation requirements of section 7-52(3)b.2 in that the structure must be elevated to a maximum of 60 inches (five feet). Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 7-51(4), Elevated Buildings.

The city engineer shall certify the lowest floor elevation level and the record shall become a permanent part of the permit file.

(Ord. No. 99-2, Art. 4, § C, 2-2-99; Ord. No. 2006-36, Art. 4, § D, 9-19-06)

Sec. 7-54. - Standards for areas of shallow flooding (AO zones).

Areas of special flood hazard established in section 7-7, may include designated "AO" shallow flooding areas. These areas have base flood depths of one to three feet above ground, with no clearly defined channel. The following provisions apply:

- (1) All new construction and substantial improvements of residential and nonresidential structures shall have the lowest floor, including basement, elevated to the flood depth number specified on the flood insurance rate map (FIRM) above the highest adjacent grade. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 7-51(4), Elevated Buildings.

The city engineer shall certify the lowest floor elevation level and the record shall become a permanent part of the permit file.

- (2) New construction or the substantial improvement of a nonresidential structure may be flood-proofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be water tight to the specified FIRM flood level or two feet (if no map elevation is listed), above highest adjacent grade, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect

shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and as required in subsections 7-32(1)c. and (2).

- (3) Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

(Ord. No. 99-2, Art. 4, § D, 2-2-99; Ord. No. 2006-36, Art. 4, § E, 9-19-06)

Sec. 7-55. - Floodways.

Located within areas of special flood hazard established in section 7-7, are areas designated as floodway. A floodway may be an extremely hazardous area due to velocity floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment in order to allow for the discharge of the base flood without increased flood heights. Therefore, the following provisions shall apply:

- (1) The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point;
- (2) Encroachments are prohibited, including fill, new construction, substantial improvements or other development within the adopted regulatory floodway. Development may be permitted however, provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the encroachment shall not result in any increase in flood levels or floodway widths during a base flood discharge. A registered professional engineer must provide supporting technical data and certification thereof;
- (3) Require, until a regulatory floodway is designated, that no new construction, substantial improvements, or other development (including fill) shall be permitted within zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.
- (4) Only if subsection (2) or (3) above are satisfied, then any new construction or substantial improvement shall comply with all other applicable flood hazard reduction provisions of article III.

(Ord. No. 99-2, Art. 4, § E, 2-2-99; Ord. No. 2006-36, Art. 4, § C, 9-19-06)

**Editor's note**— Prior to the enactment of Ord. No. 2006-36, adopted Sept. 21, 2006, § 7-55 pertained to coastal high hazard areas (V zones).

Sec. 7-56. - Standards for subdivisions.

- (a) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- (c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards, and;
- (d) Base flood elevation data shall be provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions, greater than 50 lots or five acres, whichever is the lesser.



(Ord. No. 99-2, Art. 4, § F, 2-2-99; Ord. No. 2006-36, Art. 4, § F, 9-19-06)

## Chapter 7.5 - GARBAGE, REFUSE AND TRASH<sup>[1]</sup>

Footnotes:

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**Editor's note**— Ord. No. 2004-02, §§ 1—16, adopted Jan. 6, 2004, repealed Ch. 7.5, §§ 7.5-1—7.5-16, in its entirety and enacted a new Ch. 7.5, §§ 7.5-1—7.5-16 to read as set out herein. Former Ch. 7.5 pertained to similar material and derived from Ord. No. 2000-52, §§ 1, 2, adopted Aug. 15, 2000.

### Sec. 7.5-1. - Definitions.

For the purposes of this article, the following words and phrases shall have the meanings respectively ascribed to them in this chapter:

*Ashes.* The residue from the burning of wood, coal, coke or other combustible materials.

*Customer.* Shall mean the occupant and/or the owner of the premises.

*Debris.* Shall mean materials not categorized as trash or garbage.

*Garbage.* Shall mean and include all waste and discarded foods, animal and vegetable matter and all other putrescible waste matter, including food containers, drink containers, food cans and food packaging materials, but not including liquid waste or body waste.

*Garbage container.* Shall mean and include a receptacle or can having a capacity of not more than 32 gallons of substantial metal or weather resistant plastic construction, with cans having a tight fitting lid or cover, with not less than one handle on the lid of cover and two handles on the side of the receptacle which can be conveniently lifted or moved. The total weight of the container and contents shall not exceed 60 pounds.

*Premises.* Any residential unit, dwelling, flat, rooming house, apartment house, townhouse, condominium, hospital, school, hotel, club, restaurant, boarding house, eating place, shop, place of business, commercial establishment, manufacturing establishment, courthouse, jail, city hall, post office or other public building.

*Posting of notice.* Placing a notice of any violation on an entrance or exit of the premises.

*Producers.* Shall mean any occupant, owner, lessee or other party packaging or setting material in rights-of-way for pick-up.

*Route.* The particular streets, alleys and right of ways, scheduled by the city for garbage pick-up on particular days of each week.

*Sanitation department.* The sanitation department of the City of Irondale, Alabama.

*Trash.* Nonputrescible solid wastes consisting of both combustible and noncombustible wastes, such as paper, cardboard, tin cans, yard clippings, grass cuttings, leaves, tree limbs, wood, glass, bedding, crockery, metals and other nonputrescible solid waste substances not included in the definition of "garbage" as it appears in this chapter.

(Ord. No. 2004-02, § 1, 1-6-04; Ord. No. 2008-46, § 1, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

### Sec. 7.5-2. - Collection by the city (generally).

To the extent prescribed in this chapter, trash and garbage accumulated within the corporate boundaries of the city shall be collected, conveyed and disposed of by the sanitation department of the

city under the supervision of the director of public works, who is responsible for enforcement of this chapter.

(Ord. No. 2008-46, § 2, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-3. - Categories not to be collected.

The following categories of trash, debris and garbage will not be collected, conveyed or disposed of by the city. The actual producers thereof, i.e. owners, lessees, occupants and other parties entering on the premises on which such trash, debris and garbage is accumulated, shall be responsible for collecting, conveying and disposing of such trash, debris and garbage in accordance with the provisions of subsection 7.5-8(3):

- (1) Dangerous materials and substances such as poisons, acids, caustics, infected materials, hot ashes, highly inflammable materials and explosives, including but not limited to paint cans (unless empty and open or filled with sand or dirt), lead plate batteries, and any and all material considered hazardous waste by the state department of environmental management;
- (2) Rocks, dirt, earth;
- (3) Rubber, rubber products (i.e. tires), roofing and similar materials;
- (4) Any debris, trash or other materials resulting from demolition, repair, excavation or construction of buildings or structures by contractor, or from work performed by persons in landscaping, tree service, plumbing, heating and cooling and other like businesses, or from a resident performing job and serving as contractor. It shall be the responsibility of the owner to cause this waste to be removed. This subsection does not, however, prohibit a resident from performing minor landscaping work on the resident's property and disposing of the resulting debris in conformance with the terms of this chapter;
- (5) Solid wastes resulting from industrial or commercial processes;
- (6) [Intentionally omitted]
- (7) Trash, debris and garbage not prepared for collection by the city in accordance with the provisions of this chapter;
- (8) Dog and cat litter and the clean-up from animal pens;
- (9) [Intentionally omitted]
- (10) Leaves, grass and cuttings not in a plastic bag or in a container or not placed in the collection service area as defined in section 7.5-4(2) below.

The deposit of any of the foregoing categories of trash, debris and materials in containers or on the street, alley or collection service area as defined in section 7.5-4(2) below for collection shall be deemed a violation of this chapter.

(Ord. No. 2004-02, § 3, 1-6-04; Ord. No. 2005-63, 10-4-05; Ord. No. 2008-46, § 3, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-4. - Service and service requirements.

Service will be provided by the city and the trash and garbage shall be prepared for collection by the residents of the city in the following manner.

- (1) Collection of garbage will be made once weekly. The city shall strive to collect trash and debris on a routine basis. In the event the collection date is a legal holiday or the collection is delayed as a result of circumstances beyond the control of the sanitation department, the collection shall be rescheduled and residents will be notified of an alternate date. Exceptions to this section

may be made in the event of natural disasters or a state of emergency, in the discretion of the mayor.

- (2) Garbage must be stored in a garbage container as herein defined. Use of plastic liner bags or the placement of garbage in plastic trash or garbage bags in the garbage containers is required. Loose garbage placed in containers without being contained in bags will not be collected. Garbage will not be collected from containers which do not meet the city standards. Garbage cans to be emptied, as herein provided, must be outside of basements, garages and other similar enclosed areas, located no further than three feet from the street or alley of the collection route, must be visible and accessible from the public street, private street or alley constituting a part of the route of the city's garbage pickup service, and must not impede or otherwise interfere with any use of the right-of-way. The area which meets all requirements in the preceding sentence shall be referred to in this chapter as the "collection service area". No garbage or garbage container shall be left for more than 24 hours at the collection location after being serviced. It shall be a violation of this chapter for any garbage containers to remain permanently on or at the collection service area. Any owner, occupant, lessee, firm, corporation partnership or other entity who is found to have violated this section of this chapter shall, upon conviction, be punished in accordance with section 1-10 of this Code as adopted on November 10, 1990, or as it may be hereafter amended. Punishment under this section shall be in addition to all other remedies as herein set out and/or contained in any other ordinance.
- (3) No more than three garbage containers, as defined in section 7.5-1, will be removed.
- (4) Logs not exceeding six feet in length and ten inches in diameter will be collected subject to equipment limitations and section 7.5-3.
- (5) Trash, leaves, limbs, bushes, etc. should be placed in the collection service area as herein required. They shall not be placed on the street or in gutters.
- (6) Garbage should be set out by 6:30 a.m. on the morning of scheduled garbage collection service.
- (7) Leaves, grass and cuttings should be placed in a covered container or plastic bag properly secured and placed in the collection service area. Leaves or grass not in a container or plastic bag properly secured will not be picked up. In no instance shall leaves, limbs or vines be placed on the street, over stormwater drains or in gutters. Limbs and vines must be also placed in the collection service area.
- (8) Any dog which harasses city employees in any way must be leashed, chained or locked in a resident's garage or basement, fenced area or kept inside the residence or building on the scheduled days of collection service. Where dogs are kept fenced in, garbage cans must be kept outside the fenced area.
- (9) Garbage, tin cans and other receptacles which have contained food shall, after being drained free of all liquid, be deposited in garbage containers and shall, unless otherwise authorized or directed by the director of public works, be kept in an area not visible from the street until collection day.
- (10) Ashes (including fireplace ashes) shall, after all embers have expired, be deposited in appropriate closed containers, separate and apart from garbage, debris and trash and placed in the collection service area. Such containers shall be fireproof, watertight and equipped with handles adequate to facilitate collection and shall have a capacity of not more than 32 gallons. The total weight of the container and contents shall not exceed 60 pounds.
- (11) Trash (exclusive of leaves, limbs and brush, which must be handled as provided in subsection (5) or (7) above) shall be deposited in trash containers or plastic bags and apart from garbage and ashes. Such containers shall be left for collection in the collection service area. No trash shall be placed in the same container or receptacle with garbage in any amount. Any broken glass or pottery must be placed in a trash container or receptacle and placed for collection as hereinabove provided.

- (12) Trash, debris and garbage not prepared for collection in accordance with the foregoing provisions of this section shall not be collected by the city. Where the failure to comply with such provisions arises by virtue of the failure to properly bag or prepare material for pickup or the use of defective containers, such as containers which leak or which have ragged or sharp edges or other defects, which could hamper or injure city employees and/or other persons engaged in collecting the contents thereof, the owners of such containers or the persons utilizing such containers shall be given 48 hours after notice to correct such defect before such owners or other persons shall be deemed guilty of a violation of this chapter. Notice will be given by placing a tag marked "condemned" on the defective container. The placing of said tag shall be considered properly posted notice of a violation. A garbage container that has been deemed defective or condemned will no longer be serviced by the city. A defective or condemned container placed at curbside or at the collection service area will be picked up by the city only upon the owner's checking of the appropriate box and signing of the condemned tag.

(Ord. No. 2004-02, § 4, 1-6-04; Ord. No. 2005-63, 10-4-05; Ord. No. 2008-46, § 4, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-5. - Powers of public works director.

The public works director or his designated representative shall have authority to implement and enforce the provisions of this chapter.

(Ord. No. 2004-02, § 5, 1-6-04; Ord. No. 2008-46, § 5, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-6. - Dead animals.

Dead animals of less than 75 pounds in weight shall be collected without charge upon request made to the sanitation department or the police department of the city. Such animals must be deposited in appropriate closed containers or plastic bags, separate and apart from other garbage, debris and trash and placed in the collection service area.

It is hereby declared a nuisance and health hazard and in violation of this chapter for a dead animal, regardless of size, to remain undisposed of on any premises within the city for a period of longer than 24 hours duration.

(Ord. No. 2004-02, § 6, 1-6-04; Ord. No. 2008-46, § 6, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-7. - Commercial property and institutions.

Garbage generated by businesses, churches, schools and other private institutions unless excluded herein shall be collected by the city or its representative and disposed of in accordance with health department requirements. Collection shall be on a rotating schedule to provide at least once weekly service to all commercial property. Businesses generating food waste shall utilize a containerized collection system. Businesses generating garbage in excess of eight 32-gallon containers or receptacles per week on a regular basis shall utilize a containerized collection system. All other businesses and institutions shall deposit garbage in garbage containers sufficient to confine all garbage. No loose debris will be collected. Collectors are prohibited from entering any building to make collection. Collections shall be made at the front or rear of all premises or in accordance with this chapter, any other city ordinance or other regulation which takes precedence.

(Ord. No. 2004-02, § 7, 1-6-04; Ord. No. 2008-46, § 7, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-8. - Owner or occupant's duties (generally).

No owner, lessee or other occupant of any premises located within the city shall permit or suffer any trash, garbage or debris to accumulate on such premises. Such accumulation is hereby declared to be a "nuisance" and is prohibited.

Such owner, lessee or other occupant or person shall jointly and severally be responsible for each of the following:

- (1) Providing garbage and trash containers in sufficient size and number, of appropriate design and construction, except as provided in subsection 7.5-4(5) or (7), to accommodate and keep in a safe and sanitary manner all trash and garbage accumulated on such premises between times of collection. Such containers shall be durable, rust resistant, watertight, nonabsorbent construction, equipped with a close fitting cover or lid as hereinabove provided and, if used for storage of ashes, shall be fireproof.
- (2) Depositing into such containers all trash and garbage, except as provided in subsections 7.5-4(5) and (7), from such premises promptly as it accumulates; for keeping such containers in a clean, neat and sanitary condition at all times, which includes tightly securing the lids or covers thereon at all times other than when trash or garbage is being deposited therein or being removed therefrom in accordance with the terms of this chapter; and for generally maintaining the premises in a sanitary condition at all times, which included preventing the access of flies, rodents and animals to such trash and garbage and preventing the soiling of the ground or surface upon which such garbage or waste containers stand.
- (3) Having such trash and garbage not collectible by the city promptly collected, conveyed and disposed of in a manner approved by the county department of health and at the same frequency as the collection service of the city.
- (4) Having such trash and garbage as is collectible by the city prepared for collection in accordance with the provisions of this chapter.

(Ord. No. 2004-02, § 8, 1-6-04; Ord. No. 2008-46, § 8, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

#### Sec. 7.5-9. - Multiple-family dwellings or buildings and mobile home parks.

The owners, tenants and other occupants of any premises located within the city which is used for business purposes, mobile home parks, or multiple family dwellings shall jointly and severally be responsible for providing a storage area in which shall be kept the garbage containers and trash containers required by this chapter.

It shall be unlawful for any owner, tenant or other occupant of any such property or for any employee, servant, or agent of such person or entity to place or deposit any trash or garbage from such business operation in a trash basket or waste receptacle maintained by the city on the public streets or sidewalks or in any trash or garbage container other than ones located in such storage area.

(Ord. No. 2004-02, § 9, 1-6-04; Ord. No. 2008-46, § 9, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

#### Sec. 7.5-10. - Unlawful to litter.

It shall be unlawful for any person to throw, cast or otherwise deposit or cause to be thrown, cast or otherwise deposited any paper, garbage, trash, debris, rubbish, containers (either glass, metal or paper) or any other substance of any kind in or upon any curb, gutter, sidewalk, street, avenue, highway, tunnel, sidewalk, park, parkway or lot, vacant or occupied.

It shall be unlawful for any person to sweep or deposit in the public streets, curblines, sidewalks or gutters any solid waste, grass cuttings, limbs, leaves, bushes or any other material or article that would tend to impede the flow of water in the gutters or along the streets or sidewalks or that would tend to clog the storm drainage system or be an obstruction to traffic or pedestrians.

(Ord. No. 2004-02, § 10, 1-6-04; Ord. No. 2008-46, § 10, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-11. - Removal of garbage from garbage containers.

It shall be unlawful for any person to remove any garbage, rubbish, refuse or other like materials from any garbage container except his/her or its own, within the corporate limits of the city after it has been placed therein, except under the orders of an officer, agent or employee of the sanitation department or by some other person removing same for disposal or by any law enforcement agent or other person empowered by law.

(Ord. No. 2004-02, § 11, 1-6-04; Ord. No. 2008-46, § 11, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-12. - Illegal use of another's garbage container to avoid collection fee.

It shall be unlawful for any person or entity not subscribing to the collection service to place their garbage and or trash in a container belonging to another for the purpose of avoiding payment of collection fees. Any such action by any person or entity shall be prima facie evidence of such intent unless proven otherwise by substantial evidence.

(Ord. No. 2004-02, § 12, 1-6-04; Ord. No. 2008-46, § 12, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-13. - Removal of public trash receptacles.

It shall be unlawful for any person to remove or cause to be removed from any street, sidewalk, park or other municipal property in the city any receptacle furnished by or on behalf of the city for the deposit of trash. It shall be unlawful for any person to sit upon, deface, tamper with, mutilate or destroy any such receptacle or cause it to be used in any way which will make it inaccessible for the receipt of trash.

(Ord. No. 2004-02, § 13, 1-6-04; Ord. No. 2008-46, § 13, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-14. - Inspections by health officers; right of health officers to enter at reasonable times; resisting inspection.

Any health officer of the county, the director of public works or such other authorized inspector as may be designated by the director of public works shall, after identifying himself or herself to such persons as may then be present, have the authority to enter at reasonable times upon private property within the city for the purpose of inspecting and investigating such premises with respect to compliance with the terms of this chapter. It shall be unlawful for any person to resist or interfere with such inspection.

(Ord. No. 2004-02, § 14, 1-6-04; Ord. No. 2008-46, § 14, 8-7-08; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-15. - Fees and penalties.

(a) *Garbage.*

- (1) Garbage collection, hauling and disposal service is conducted by the city's sanitation department, a division of the department of public works, and is hereinafter referred to as the "garbage collection service" or "collection service."
- (2) For the garbage collection service rendered during each 12-month period beginning on February 1 of each year, each business, institution or residential unit receiving service or eligible to receive service shall pay to the city a fee, unless said business, institution or

residential unit is subject to and compliant with the provisions of section 7.5-16. The total of said fees should approximate the cost to the city of said service and may be periodically determined and adjusted by the city council by amendatory ordinance.

- (3) Any garbage collection service fee shall be the responsibility and liability of the business, institution or residential owner and/or occupant last listed at each premises unless and until a proper discontinuation of service form is completed and received by the city sanitation department, or until such time as the business, institution or owner/occupant becomes subject to the provisions of section 7.5-16 and complies with the requirements set out therein.
- (b) *Trash.* There is no fee for trash and debris collection as long as such trash or debris is handled in a manner consistent with the requirements of this chapter. Improperly bagged or disposed of trash or debris in violation of this chapter shall, after the posting of one 48-hour notice, result in an assessment against the customer and the collection of a fee on the city's cost of removal of said trash and debris with a minimum of a \$100.00 charge.
- (c) *Multiple-family dwellings or buildings and mobile home parks of more than five units.* For the collection service to be rendered for each 12-month period beginning February 1 of each calendar year, unless amended, any person firm, corporation, institution or other entity owning investment property, rental property or mobile home parks consisting of more than five units within the city shall be responsible for all solid waste fees on each occupied unit or rental parcel. Each person, firm, corporation, institution or other entity in charge or control of each residential unit of a multi-family dwelling or apartment or mobile home park, where the city is furnishing such collection service, shall pay to the city a fee per occupied residential unit or mobile home site as follows:
  - If paid monthly ..... \$ 20.00
  - If paid quarterly ..... 60.00
  - If paid semi-annually ..... 110.00
  - If paid annually ..... 220.00
- (d) *Single-family dwelling units.* For the collection service to be rendered for each 12-month period beginning February 1 of each calendar year, unless amended, the persons occupying and in charge or control of each single-family dwelling unit and or/the owner of each single-family dwelling unit shall pay the city a fee per residential unit as follows:
  - If paid monthly ..... \$ 20.00
  - If paid quarterly ..... 60.00
  - If paid semi-annually ..... 110.00
  - If paid annually ..... 220.00
- (e) *Business or institution.* For the collection service rendered for each 12-month period beginning February 1 of each calendar year, unless amended, each business or institution receiving service shall pay the city a fee per unit as follows:
  - If paid monthly ..... \$ 40.00
  - If paid quarterly ..... 120.00
  - If paid semi-annually ..... 220.00
  - If paid annually ..... 440.00
- (f) *When increases apply for prepaid customers.* Any and all increases in garbage collection fees shall not apply for any period, whether that be quarterly, six-month or 12-month, which has been prepaid



by a customer. After the expiration of said quarter, six-month or 12-month prepayment period, any increase in garbage fees shall apply to the prepaying customer.

(g) *Billing procedures, late charges and delinquent accounts.*

- (1) All bills for collection service shall be rendered on behalf of the city by the city clerk and shall be due and payable in advance within ten days from the date rendered, provided that fees may be paid in installments as hereinabove provided, and provided further, that at the initiation of service, a person, firm, corporation, institution or other entity shall pay at a pro-rata rate for the 12-month period in which service for such person is begun. Upon request of a customer who no longer occupies a residential or business site where fees for collection service were paid, a pro-rata refund will be given for quarterly, semi-annual or annual fees paid in advance.
- (2)
  - a. Payments on bills where collection service is billed jointly with water service shall be first applied to outstanding collection service fees. A monthly late fee of \$7.50 shall then be applied to any outstanding charges for water service. This late fee shall be in addition to the late fee for water service charges as set out in section 18-14(b).
  - b. Where collection service only is billed, in the event payment is not made for the collection service within the time provided in paragraph (1) of this subsection, such payment shall be deemed delinquent and shall bear a late penalty of \$7.50 per month for each month until paid. Furthermore, any collection service only bill which remains unpaid for a period of 90 days or more shall bear interest at the rate of 1½ percent per month from the date of delinquency until all of the outstanding balance is paid in full.
  - c. All fees imposed by this subsection 7.5-15(g)(2) are in addition to all other penalties or remedies, civil or criminal, allowed by this chapter.
- (3) All payments for garbage collection, hauling and disposal service or any other payments made pursuant to the provisions of this chapter shall be made as directed on the bill for said service. Water and/or garbage payments may be paid online; however, said payments may only be made in full. No partial payments may be made online. The city shall have the right to proceed for the collection of delinquent garbage collection service fees, suspend services, or both, if garbage collection service fees are not paid within 30 days after the same shall come due and payable pursuant to Code of Ala. 1975, § 22-27-5. In the event delinquent charges and fees are referred to an attorney for collection, the occupant shall pay all costs of collection including a reasonable attorney's fee, special process server fee (as a part of collection) and court costs if a court action is filed.
- (4) In the event an account becomes delinquent and unpaid for a period of 90 days, any subsequent payment shall be applied in the following order: First, to the costs of collection, including, but not limited to, attorney's fees, special process server fees, and court costs; second, to any and all late charges and outstanding interest as calculated hereinabove; third, to the outstanding delinquent balance; and fourth, to the current charges due, if any.
- (5) Any person, firm, corporation, partnership or other entity, who is found to have violated any provision or section of this chapter shall, upon conviction, be punished with a fine of not less than \$50.00 nor more than \$200.00 for each day that the amount remains unpaid, in accordance with Code of Ala. § 22-27-7, as it may be hereafter amended. Punishment under this section shall be in addition to all other remedies as herein set out in section 7.5-15.
- (6) In addition to all other penalties or remedies contained in this section 7.5-15(g), the city may publish the names and account balances of delinquent garbage customers. However, personal information shall not be published.

(Ord. No. 2004-02, § 15, 1-6-04; Ord. No. 2008-46, § 15, 8-7-08; Ord. No. 2010-26, 7-6-10; Ord. No. 2010-34, §§ 1, 2, 8-17-10; Ord. No. 2010-40, 10-8-10; Ord. No. 2010-50, 11-16-10; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-16. - Mandatory service requirement exemptions.

- (a) A person, household, business, industry or any property owner may store, haul and dispose of his or her own solid wastes on his or her land or otherwise, provided such storage, haulage or disposal is accomplished pursuant to an exemption or certificate of exception granted by either the county department of health or the Alabama Department of Environmental Management, pursuant to Code of Alabama § 22-27-3(a)(3) or § 22-27-3(g).
- (b) No exception, exception fee, or any other review, approval or payment shall be required of any generator for the collection, handling or disposal of its own solid waste using facilities or equipment owned by the generator, its corporate parent, affiliate or subsidiary and duly permitted for such use by the state department of environmental management or its successor in function, in compliance with Code of Alabama § 22-27-3(g) (2).
- (c) Additionally, any household (1) whose sole source of income is social security benefits, or (2) whose head of household is 65 years of age or older and the combined income of all adult residents of said household, including applicant, shall not exceed 75 percent of the Federal Poverty Guidelines (for the year the exemption is being requested), shall be granted an exemption from the payment of any residential garbage collection fees required by this article, consistent with Code of Alabama § 22-27-3(a). Any outstanding and/or delinquent balance incurred prior to the exemption approval date shall not be exempt from the assessment and/or collection procedures described in this chapter. Applications for exemptions shall be filed in the office of the clerk on forms provided and shall be granted or denied by the clerk. The household for which the exemption is being requested must be the primary residence of the applicant and garbage collection service must be registered in the name of the applicant requesting the exemption. As proof of eligibility for exemption, applicant shall provide a certified copy of the most recent year's income tax returns for which the exemption is being requested. If applicant and/or any resident of applicant's household are exempt from filing yearly income tax returns, each shall be required to submit a sworn statement declaring such, and shall additionally provide a current statement of benefits received from social security, and current bank statement. All applications for exemptions must be filed between January 1 and January 31 each year the exemption is being requested. No applications received after January 31 shall be accepted. All exemptions shall be in place for a 12 month period. Renewal of exemption shall not be automatic. Applicant shall grant permission for the agents of the city to investigate any or all parts of the information provided on the application by means of signing said application for exemption.
- (d) It shall be unlawful for any person to willfully misrepresent any information or make any false statements for the purpose of receiving an exemption or maintaining an exemption. Pursuant to the Code of Alabama, 1975, § 22-27-7 violation of any provision of this article shall be a misdemeanor and any person firm or corporation found guilty shall upon conviction be punished by a fine of not less than \$50.00 nor more than \$200.00.

(Ord. No. 2004-02, § 16, 1-6-04; Ord. No. 2004-25, 6-15-04) ; Ord. No. 2008-46, § 16, 8-7-08; Ord. No. [2015-2](#), 1-6-15; Ord. No. [2017-57](#), 6-6-17)

Sec. 7.5-17. - Recycling.

- (a) It shall be unlawful for any person or entity to deposit, place or leave any item in a container marked for recyclable materials other than the following allowed items: junk mail, magazines, clean cardboard boxes, office paper, newspaper, aluminum cans, steel and tin cans, and #1 and #2 plastic bottles. No other items may be placed in a container marked for recyclable materials, including the following non-exhaustive list of prohibited items: plastic bags, Styrofoam, glass, phone books, trash and any item made with #3, #4, #5, #6 or #7 plastic.
- (b) A violation of this section shall carry the following penalty:
  - (1) *First offense.* A first offense shall carry a fine of \$150.00 plus court costs.

- (2) *Second offense.* A second offense shall carry a fine of \$250.00 plus court costs.
  - (3) *Third offense.* A third offense or more shall carry a fine of \$500.00 plus court costs and incarceration in the city jail for a mandatory minimum 48-hour period.
- (c) Recycling services will be provided weekly.

(Ord. No. 2010-13, 4-6-10; Ord. No. [2015-42](#), 3-3-15; Ord. No. [2017-57](#), 6-6-17)

**Editor's note**— Ord. No. 2010-13, adopted April 6, 2010, was codified herein as § 7.5-17 at the discretion of the editor.

Sec. 7.5-18. - Solid waste operators.

(a) *License required.*

- (1) It is unlawful for any person to operate or cause any other person to operate a motor vehicle upon a public street within the city for the purpose of removing solid waste from a commercial property or construction debris from a residential property located within the city's corporate limits for compensation unless the person that owns or controls the motor vehicle has a valid commercial waste operator's license issued by the city.
- (2) To obtain a commercial solid waste operator's license, application must be made on forms provided by the city for that purpose along with the application fee. The application requires that the applicant:
  - a. State the name under which the operator conducts business, the business address and telephone number;
  - b. State the make and body of each motor vehicle to be used in the city;
  - c. Submit proof of liability insurance for the motor vehicles in the amounts required by state law;
  - d. By submitting the application agrees to abide by and be bound by the provisions of this article and to comply will all the other state and federal laws applicable to the licensee's activities; and
  - e. Submit any other information reasonably required by the city to administer this article.
- (3) Upon proper application, a commercial solid waste operator's license will be issued in the name of the person or entity responsible for the operation of the motor vehicles used for commercial solid waste collection in the city. The license is valid for one year, unless earlier revoked.
- (4) The city clerk or his/her designee may revoke a commercial solid waste operator's license for any violation of this article giving the license prior written notice of the violation and an opportunity to respond in person as to why the license should not be revoked.

(b) *License fee.*

- (1) Each person or entity granted a license under this article must pay a license fee equal to four percent of the operator's gross revenues from the collection, hauling, or transporting of commercial or industrial solid waste collection within the city, after excluding there from the revenues licensee received from the collection, hauling, or transporting of recycled solid waste collection within the city.
- (2) Each licensee must pay the required license fee quarterly to the city within 45 days following each September 30, December 31, March 31, and June 30. Each quarterly payment must be computed on the revenues for the quarter preceding that in which payment is due. Each licensee must provide with each quarterly payment a statement of the gross revenues upon

which the payment is computed, prepared according to generally accepted accounting practices, and signed by an authorized representative of the licensee. The licensee must pay a late fee of 12 percent per annum, compounded daily, on any quarterly payment, or portions thereof, that is paid subsequent to the required payment date.

- (3) Each quarterly payment must be accompanied by a listing of the location and number of commercial containers serviced by the licensee by the licensee in the city.
  - (4) The city may inspect and audit the licensee's records upon which payments to the city are computed and paid. If the city's inspection or audit shows that the licensee has underpaid an amount required to be paid under this article, licensee must pay the deficiency within 60 days of the date the city gives licensee written notice of the deficiency. If the deficiency is more than ten percent of the amount the licensee was required to pay for the quarter, the licensee must also pay a penalty of ten percent per annum of the deficiency and the city's reasonable cost incurred for the inspection or audit.
  - (5) The city's acceptance of a payment is not deemed to be a release or an accord and satisfaction of any claim the city may have for further and additional sums made payable under this article. The city is not liable to refund to the licensee any payment licensee makes to the city that is more than amount required to be paid by the licensee under this article.
- (c) *License regulations.*
- (1) All licensees must identify each vehicle the licensee operates within the city by placing clearly legible letters identifying the name of the person or business responsible for the operation of the motor vehicle.
  - (2) A licensee must notify the city of any change in the information submitted in an application for a license, including a change in the name, address or telephone number of the licensee. The notification must be given to the city in writing within ten days of the change.
  - (3) It is unlawful for any person to operate or use a motor vehicle to unload or empty a solid waste container by means of a mechanical lifting apparatus or device attached to the motor vehicle between the hours of 10:00 p.m. and 7:00 a.m. of the following day, if the container is located within 400 feet of a residential property.
  - (4) All garbage must be transported in leak proof containers or in leak proof vehicle bodies or compartments and must be so fitted and constructed so that the garbage is kept covered at all times except when being loaded and emptied.
- (d) *Suspension or revocation of license.*
- (1) The city may suspend or revoke a license under this article for a violation of this article in accordance with the uniform permit procedures of this Code.
  - (2) A fine of \$500.00 may be imposed on any person or entity that unlawfully operates or uses a motor vehicle to unload or empty a solid waste container by means of a mechanical lifting apparatus or device attached to the motor vehicle between the hours of 10:00 p.m. and 7:00 a.m. of the following day, if the container is located within 400 feet of a residential property.

(Ord. No. [2013-65](#), 4-16-13; Ord. No. [2017-57](#), 6-6-17)

**Editor's note**— Ord. No. 2013-65, adopted April 16, 2013, was codified herein as § 7.5-18 at the discretion of the editor.

## DIVISION 2. - JUNKED AND ABANDONED MOTOR VEHICLES<sup>3</sup>

Footnotes:

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**Editor's note**— Ord. No. 4-0794, §§ 1—10, adopted July 5, 1994, superseded former §§ 9-51 and 9-52 which pertained to junked and abandoned motor vehicles. The provisions of said ordinance have been included herein as a new div. 2, §§ 9-51—9-61. See the Code Comparative Table.

**Cross reference**— Traffic and motor vehicles, ch. 17.

Sec. 9-51. - Junked, abandoned or non-operational motor vehicles—Exterior storage.

(a) *Generally.* No person in charge of or in control of premises, whether as owner, lessee, tenant, occupant, or otherwise shall allow any partially dismantled, wrecked, junked, discarded or otherwise non-operable motor vehicle to remain on such property longer than 20 days.

(b) *Exceptions:*

(1) This section shall not apply with regard to any vehicle in an enclosed building or so located upon the premises as not to be readily visible from any public place or from any surrounding private property.

(2) This section shall not apply with regard to any vehicle on the premises of a business enterprise operated in a lawful place, other than in a residential district, and operated in a lawful manner, when the keeping or maintenance of such vehicle is necessary and reasonable to the operation of such business enterprise.

(3) This section shall not apply with regard to a vehicle in an appropriate storage place or depository maintained in a lawful place and manner by the city or any other public agency or entity.

(c) *Enforcement.* This section may be enforced either by a police officer of the city or by the building inspector or other person designated by the mayor and council.

(d) *Definitions.* The following definitions shall apply:

*Abandoned* is defined as being parked or left on premises (not your own or not in front or near your legal residence) or that which is parked in front or on another's property.

*Non-operable* is defined as being unable to be legally operated on public street (to include a current license tag and/or decal).

(Ord. No. 4-0794, § 1, 7-5-94)

Sec. 9-52. - Same—Storing of abandoned vehicles on public streets.

(a) No person shall be permitted to store or engage in the storage of any vehicle, whether motorized or propelled by another vehicle, of any type, upon the public streets, alleys or rights-of-way within the city for a period not in excess of 72 hours. After the initial 72-hour period, the vehicle shall be cited for illegal parking by a police officer of the city. For such offense, there shall be imposed, upon conviction, a \$50.00 fine assessed against the (1) owner of record, (2) and/or the current owner, (3) or the last person operating the vehicle if he/she can be identified.

(b) The police officer may have the vehicle towed immediately, if in his/her opinion, the vehicle represents an immediate traffic hazard.

- (c) After a period of 72 hours from the date upon which the vehicle is cited by the police department, the police department shall have the right to order the vehicle towed by a private wrecker service and disposed of pursuant to the provisions of state law.
- (d) The terms "store" or "storage" are defined as the vehicle being parked or remaining unmoved in or from the same location for a period in excess of 72 hours.

(Ord. No. 4-0794, § 1, 7-5-94)

Sec. 9-53. - Motor homes, recreational vehicles, travel trailers, boats, or other similar vehicles with two or more axles.

- (a) No person owning, leasing, occupying, possessing and/or having charge of any premises or business within the city shall park, keep or maintain any motor home, recreational vehicle, travel trailer, boat, or any similar type vehicle upon the streets, alleys or rights-of-way within the city.
- (b) Any motor vehicle having more than two axles, including the front axle shall not operate and shall be prohibited from operating in any area which is primarily residential or any area in the city zoned as follows: R-1, R-2. The term "operate" shall include but not be limited to the parking, driving, repairing or otherwise operating of said motor vehicle in said prohibited areas.
- (c) This division shall not prohibit the parking of a legally operable motor vehicle on the street or right-of-way in front of a residence when adequate parking is not available on private property unless:
  - (1) It has been designated and posted as a "No Parking" area.
  - (2) It is on a major thoroughfare and is considered as a traffic hazard by the chief of police or his representative.
  - (3) It is deemed by the chief of police or his representative to impede the proper flow of traffic.
  - (4) It has more than two axles and is in an area zoned R-1 or R-2.

(Ord. No. 4-0794, § 2, 7-5-94)

Sec. 9-54. - Semitrailers.

No semitrailer truck or any part thereof shall be parked upon the public ways of the city, other than for the expeditious loading, delivery, pickup and/or loading of materials.

(Ord. No. 4-0794, § 3, 7-5-94)

Sec. 9-55. - Authority over traffic control devices and authority to post signs.

- (a) The chief of police shall cause to be erected and maintained all official signs, signals or devices to regulate traffic in any street or avenue in the city as he shall see fit in accordance with the exercise of reasonable police power.
- (b) No operator or owner of any motor vehicle, as defined by the Highway Code of the State of Alabama, shall drive, or allow to be driven, any such motor vehicle on any street in a manner contrary to any regulatory sign, signal or device placed by order of the chief of police.
- (c) The chief of police or any other person so designated by the mayor and city council shall post or cause to be posted suitable signs indicating a restricted or prohibited parking zone.

(Ord. No. 4-0794, § 4, 7-5-94)

Sec. 9-56. - No parking zone.

No person shall park a motor vehicle in any designated area when such area is properly marked with yellow paint and/or with an appropriate sign.

(Ord. No. 4-0794, § 5, 7-5-94)

Sec. 9-57. - Emergency vehicles.

The provisions of this division shall not apply to police, fire or other emergency vehicles while in the active discharge of their duties.

(Ord. No. 4-0794, § 6, 7-5-94)

Sec. 9-58. - Owner presumed operator.

The presence of an unattended, junked, abandoned or non-operable motor vehicle on the premises of one who is not the owner or in control of such vehicle or in a restricted or prohibited parking area shall raise a prima facie presumption of evidence that the registered owner of the automobile or other motor vehicle parked or left or caused to be parked or left the automobile or other motor vehicle on such premises, and the burden of proof shall be upon the registered owner to show otherwise.

(Ord. No. 4-0794, § 7, 7-5-94)

Sec. 9-59. - Authority to cite or tow.

Any police officer of the city is hereby authorized to place a traffic citation on a motor vehicle for parking in a designated restricted zone. Any police officer of the city is authorized to remove or cause to be removed to the nearest garage or other place of safety any motor vehicle found parked in a restricted or prohibited zone when such vehicle has been left unattended for a period of 72 hours or is determined by the police officer that such motor vehicle constitutes a hazard to traffic or to the general public of the city by being parked in the restricted parking zone.

(Ord. No. 4-0794, § 8, 7-5-94)

Sec. 9-60. - Punishment.

Except as stated above in section 9-52, the court upon conviction of any part of this division may impose a fine not to exceed \$500.00 and/or impose a jail sentence not to exceed six months. Further, that upon the conviction of the above division, the court may in its discretion impose as an additional fine or cost any expense of towing, storage or disposition of any vehicle involved in the above division by the city.

(Ord. No. 4-0794, § 9, 7-5-94)

Secs. 9-61—9-70. - Reserved.

**ORDINANCE 2018-12**

**STORMWATER MANAGEMENT AUTHORITY, INC.  
POST-CONSTRUCTION ORDINANCE**

**RECITALS**

**Section 1  
DEFINITIONS**

**Section 2  
ADMINISTRATION**

**Section 3  
POST-CONSTRUCTION BMP DESIGN**

- Section 3.1 Design Standards.
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**Section 4  
APPLICATION REQUIREMENTS**

- Section 4.1 Post Construction BMP Design Description.
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MISCELLANEOUS**

- Section 6.1 Notices.
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**STORMWATER MANAGEMENT  
POST-CONSTRUCTION  
ORDINANCE**

**RECITALS**

**WHEREAS**, the City of Irondale operates under the requirements of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Permit; and

**WHEREAS**, this permit authorizes stormwater discharges from regulated small municipal separate storm sewer systems (MS4); and

**WHEREAS**, the City of Irondale must be compliant with the ADEM NPDES Permit by developing, implementing, and enforcing a program to address post-construction stormwater management; and

**WHEREAS**, the City of Irondale finds it necessary to enact an ordinance to address and enforce post-construction stormwater management standards on Qualifying Sites to prevent or minimize water quality impacts and ensure that the volume and velocity of pre-construction stormwater runoff is not significantly exceeded for the life of the property's use to the maximum extent practical (MEP).

**NOW, THEREFORE BE IT ORDAINED** by the City Council of the City of Irondale, Alabama, as follows:

## **Section 1 DEFINITIONS**

For the purposes of this ordinance, the following words and terms shall have the meaning assigned to them in this section.

**Best Management Practices** - (herein abbreviated as "BMP") - activities, prohibitions of practices, maintenance procedures and management practices designed to prevent or reduce the pollution of waters to the MS4. Best Management Practices also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage and construction sites.

**Non-structural BMPs** - Non-structural BMPs may include but not be limited to the following: preservation of open spaces and vegetation, the establishment of conservation easements, the establishment of buffers along streams and other waters, maintenance of vegetation, BMP inspection and maintenance, planning for future development or redevelopment.

**Qualifying Site** - Qualifying Site is any new development site or re-development site that results in a total land disturbance of one or more acres and sites that disturb less than one acre but are a part of a larger common development or sale that would disturb one or more acres.

**Structural BMPs** - Structural BMPs may include, but not be limited to the following: detention/ retention devices, check dams, drainage swales, lined ditches, infiltration basins, porous pavement, outlet protection, velocity dissipation devices, slope protection, constructed wetlands, rain gardens, catch basin inserts, vegetated filter strips, and rain barrels.

## **Section 2 ADMINISTRATION**

The municipal engineer for the City, the municipal official or employee who is a qualified credentialed professional, such other municipal official or municipal employee who has had sufficient experience dealing with BMP design to enable them to enforce the provisions of this ordinance, an individual or agency contracted to provide such service, shall be responsible, on behalf of the City, to enforce the provisions of this ordinance.

## **Section 3 POST-CONSTRUCTION BMP DESIGN**

### **Section 3.1 Design Standards.**

The post-construction BMPs for qualifying sites, which may include a combination of structural BMPs and/or non-structural BMPs, must be designed to ensure that the volume and velocity of pre-construction stormwater runoff, to the maximum extent

practicable, is not significantly exceeded.

The current Post Construction Stormwater Management Technical Memorandum (Addendum A) details acceptable design criteria meeting the requirement of the current NPDES Permit No. \_\_\_\_\_ and shall be the basis for the design and implementation of post-construction BMPs.

### **Section 3.2 Design References.**

By reference in this Section, the City adopts the following as design references to meet the design standards:

- a) The latest version of the "Alabama Handbook for Erosion Control, Sedimentation Control and Stormwater Management on Construction Sites and Urban Areas," Volumes 1 and 2.
- b) The latest version of the "Low Impact Development Handbook for the State of Alabama."
- c) Any stormwater design manual approved by the city that meets the design requirement of this ordinance.

## **Section 4 APPLICATION REQUIREMENTS**

As part of the Land Disturbance Application, all Qualifying Sites shall include the following components:

### **Section 4.1 Post-Construction BMP Design Description.**

Procedures and strategies of the structural BMPs and/or non-structural BMPs that meet the design standards for Qualifying Sites found in Section 3.1 of this ordinance. Submittal to the City of a certified as-built of the BMPs and a letter of substantial compliance from the design engineer is required within 120 days of construction completion.

### **Section 4.2 Post-Construction BMP Inspection Plan Description.**

Procedures and strategies that will address inspections of the BMPs to confirm proper function require corrective actions to poorly functioning or inadequately maintained BMPs, and require record keeping of maintenance activities, inspections, and corrective actions. The City shall perform or require the performance of an inspection by the developer/ owner/ operator at least once per year. Records of these inspections shall be made available to ADEM upon request and copies shall be provided to the City on an annual basis. The minimum documentation requirements for inspections are as follows:

- a) Facility type

- b) Inspection date
- c) Name and signature of the inspector
- d) Site location
- e) Owner information (name, address, phone number, fax, and email)
- f) Description of the stormwater BMP condition that may include the quality of: vegetation and soils, inlet and outlet channels and structures, embankments, slopes, and safety benches; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures;
- g) Photographic documentation of all critical stormwater BMP components;
- h) Specific maintenance items or violations that need to be corrected by the owner/operator of the stormwater control or BMP; and
- i) Maintenance agreements for long-term BMP operations and maintenance.

**Section 4.3 Post-Construction BMP Operation and Maintenance Plan Description.**

Procedures and strategies that will address adequate long-term operation and maintenance of the BMPs. One or more of the following shall be applicable (as determined by the City) to establish the responsible party for long-term operation and maintenance. The document(s) shall be provided to the City for review. Upon approval, an executed copy shall be put on file in the \_\_\_\_\_ Department:

- a) The developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another part.
- b) Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance.
- c) Written conditions in project conditions, covenants, and restrictions for residential properties assigning maintenance responsibilities to a home owner's association or another appropriate group for maintenance of structural and treatment control management practices.
- d) Any other legally enforceable agreement that assigns permanent responsibility for maintenance.

**Section 5**  
**ENFORCEMENT AND ABATEMENT**

If a responsible party fails or refuses to meet the design, operation, or maintenance standards required by this ordinance, the City, after reasonable notice, may correct a violation of the design standards, operation, or maintenance needs by performing all necessary work to place the measures in proper working condition. If the BMPs become a danger to public safety or public health, the City shall notify in writing the responsible party for changes to design, operation, maintenance, and repairs of the BMP. Upon receipt of that notice, the responsible party shall have 14 calendar days or such additional time as the City shall determine to be reasonably necessary to complete the action, to make changes to design, operation, maintenance, and repairs of the measures in an approved manner. If corrective action is not undertaken within that time, the City may take necessary corrective action. The cost of any action by the City under this Section shall be billed to the responsible party. If the responsible party refuses to pay the bill, the City is entitled to bring an action against the responsible party to pay, file a lien against the property, or both. Costs shall include interest, collection fees, and reasonable attorney fees.

**Section 6**  
**MISCELLANEOUS**

**Section 6.1 Notices.**

Whenever the City is required or permitted to:

- (a) give notice to any party; such notice must be in writing; or
- (b) deliver a document to any party; such notice or document may be delivered by personal delivery, certified mail (return receipt requested), registered mail (return receipt requested) or a generally recognized overnight carrier, to the address of such party which is in the records of the City or is otherwise known to the City.

**Section 6.2 References.**

Whenever a Section is referred to in this ordinance, unless the context clearly indicates the contrary, such reference shall be to a section of this ordinance.

**Section 6.3 Severability.**

The provisions of this ordinance are severable. If any part of this ordinance is determined by a court of law to be invalid, unenforceable or unconstitutional, such determination shall not affect any other part of this ordinance.



**Section 6.4 Captions.**

The captions of Sections and sections are for reference only, and such captions shall not affect the meaning of any provision of this ordinance.

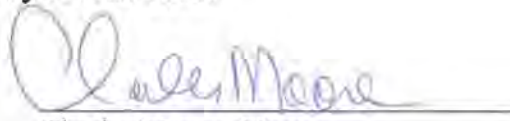
**Section 6.5 Ultimate Responsibility.**

The standards set forth herein and promulgated under this ordinance are minimum standards; therefore, this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

**Section 6.6 Effective Date.**

This ordinance shall be published as required by law and shall become effective June 7, 2018.


**ADOPTED & APPROVED** this the 7<sup>th</sup> day of June 2018.

  
Charles Moore, Mayor

**CERTIFICATION**

I, James D. Stewart Jr., City Clerk of the City of Irondale, Alabama, hereby certifies the above to be a true and correct copy of a resolution adopted by the City Council of the City of Irondale at its regular meeting held on June 7, 2018, as same appears in the minutes of record of said meeting.

ATTEST:

  
James D. Stewart Jr., City Clerk

**ADDENDUM A**



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**Overview**

In 1990, the U.S. Environmental Protection Agency (EPA) promulgated regulations establishing Phase I of the National Pollutant Discharge Elimination Systems (NPDES) stormwater program. The Phase I program for municipal separate storm sewer systems (MS4s) require operators of “medium” and “large” MS4s that generally serve populations of 100,000 or higher to implement a stormwater 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) presently has primary jurisdiction over permitting and enforcement of the Stormwater Program for Alabama. The City of \_\_\_\_\_ (City) was issued NPDES Permit Number ALS0000\_\_ on **DATE**. This NPDES Permit became effective on **DATE** and will expire on **DATE**. The City is required to develop and implement a Stormwater Management Program (SWMP) in accordance with the NPDES Permit requirements.

In accordance with the NPDES Permit, the City is required to develop and implement a Post Construction Stormwater Program to address stormwater runoff from qualifying new development and re-development projects by **DATE**. This memorandum provides technical guidance regarding the City’s updated post-construction stormwater management requirements in accordance with the City’s NPDES Permit.

**Applicable Developments**

The City’s updated post-construction stormwater management requirements are only applicable to “Qualifying New Development or Redevelopment” projects as defined below:



*“Qualifying New Development and Redevelopment” means any site that results from the disturbance of one acre or more of land or the disturbance of less than one acre of land if part of a larger common plan of development or sale that is greater than one acre. Qualifying new development and redevelopment does not include land disturbances conducted by entities under the jurisdiction and supervision of the Alabama Public Service Commission.*

Since stormwater detention and retention facilities are the primary Best Management Practices (BMPs) that have historically been used for post-construction stormwater management, this technical memorandum has been developed to address stormwater detention and retention facilities. However, this does not preclude the use of other generally accepted engineering practices.

### **Implementation**

Effective **DATE**, all qualifying new development, and redevelopment projects shall be designed in accordance with this technical memorandum.

### **Waiver Request**

The City recognizes that there are existing project sites that have been constructed or previously approved, before the effective **DATE** of this technical memorandum, that may qualify for a waiver from the updated post-construction stormwater management requirements. As a result, the City has developed an Existing Development, Post Construction Stormwater Management Waiver Request Form (Figure 1) to address existing project sites. In order for an existing project site to be considered for a waiver, the waiver request form shall be completed and submitted to the City for review and approval. If a waiver has been submitted for a development that has not been completed and the density of the development is increased and/or modified, the developer shall resubmit a waiver request for this development.

### **Water Quality Requirements**

Post-construction stormwater runoff quality is an important component of the City's SWMP. In order to meet the requirements of the City's NPDES Permit, a Water Quality Volume (WQv) must be accounted for on each project site, and BMPs must be utilized to store and treat the WQv. The required WQv is based upon the first 1.1 inches of rainfall that occurs on the project site. The WQv can be estimated as described below.

WQv = 1.1 inches / acre of additional impervious area.

For example, an existing 12.5-acre site planned for re-development contains 3 acres of existing impervious area. The proposed development will contain seven total acres of impervious area in the post-development condition. The required WQv shall be calculated as follows:

$$\begin{aligned} \text{WQv} &= 1.1 \text{ inches} * 4 \text{ acres of additional impervious area} \\ &= 1.1 \text{ inches} * (1 \text{ foot} / 12 \text{ inches}) * 4 \text{ acres} * (43,560 \text{ sq. ft.} / 1 \text{ acre}) \\ &= 15,972 \text{ cubic feet of storage required} \end{aligned}$$

The WQv that is required for each project site may be provided in multiple ways to allow greater flexibility during design. There are a number of post-construction BMPs such as detention ponds, retention ponds, bioretention swales, proprietary stormwater quality treatment devices, sand filters, etc. that may be utilized by the Owner and their Engineer-of-Record to meet the water quality requirements.

### **Low Impact Development (LID)**

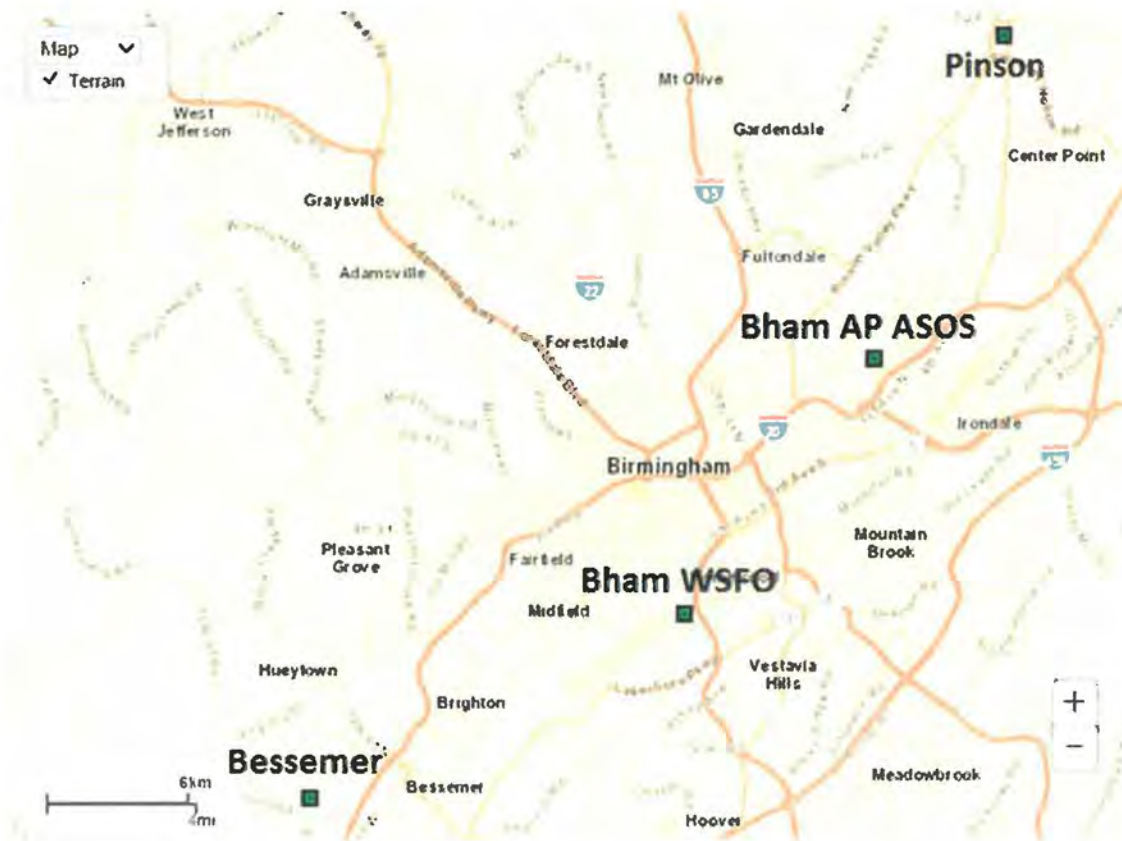
As an option for meeting the updated post-construction stormwater management requirements, the City encourages Owners and Developers to incorporate the use of low impact development (LID) practices into qualifying development and redevelopment projects. The latest version of the Alabama Low Impact Development is incorporated into this technical memorandum by reference.

### **Design Standards**

For detention and retention ponds, the calculation methodology shall utilize the National Resource Conservation Resources (NRCS) Urban Hydrology for Small Watersheds Technical Release 55 (TR-55) or equivalent. For the determination of pre-construction and post-construction stormwater runoff hydrology, the 24-hour rainfall depths from National Oceanic and Atmospheric Administration (NOAA) Atlas14, Volume 9, Version 2 included in Table 1 shall be used:

**Table 1. Design Storms**

Storm Event (24 hour)	Rainfall (inches) (Bessemer)	Rainfall (inches) (Bham WSFO)	Rainfall (inches) (Bham AP ASOS)	Rainfall (inches) (Pinson)
2-year	4.09	4.1	4.12	4.11
5-year	4.97	4.99	5.02	4.99
10-Year	5.82	5.83	5.85	5.8
25-Year	7.18	7.15	7.13	7.02
100-Year	9.71	9.56	9.39	9.15





As a part of the City's requirements for post-construction stormwater runoff management, all project sites shall be responsible for ensuring, to the MEP, that post-development runoff mimics pre-development hydrology for the 2-year, 5-year, 10- year, and 25-year rainfall depths listed in Table 1. All stormwater detention or retention facilities must be able to convey the peak flow rate associated with a 100- year, 24-hour storm event. The Owner and/or Developer shall ensure, to the MEP, that installation of post-construction BMPs shall not adversely impact and/or cause flooding of properties located upstream and downstream of post-construction BMPs.

### **Detention and Retention Ponds**

As a part of this technical memorandum, two structural BMPs (detention and retention ponds) have been highlighted as design options to assist in meeting the post-construction stormwater management requirements of the City's NPDES permit. Both detention ponds and retention ponds are fairly simple to design, construct and maintain. However, other structural BMPs may be selected by the Owner and Engineer-of-Record for review and approval by the City and are welcomed to be incorporated into the overall stormwater management plan for each project site.

A Design Form, Detention / Retention Ponds (Figure 2) has been developed by the City to aid in the design, review, and approval of detention and retention facilities. The design form provides a standard format for the Engineer-of-Record to provide information concerning pre-development conditions, post-development conditions, pond outlet configurations, pond storage, and pond peak flow discharges. For a project that contains multiple detention facilities, the Engineer-of-Record may simply provide a Design Form for each facility. While a detention pond can be utilized to meet the stormwater management requirements, some type of filtration system is needed for a detention pond to meet the stormwater quality requirements. The filtration system must allow the volume of water associated with the WQv to drain slowly out of the pond, but should drain within a forty-eight (48) hour period. Figure 3 provides some basic examples of filtering systems that may be applicable to detention ponds.

### **As-Built Certification**

As a part of the NPDES permit, the City must insure the BMPs that have been designed and approved are constructed and operated in accordance with their original design and intent. In an effort to confirm that the constructed BMPs meet the designer's intent, an As-Built Evaluation and Certification form (Figure 4) has been developed. It shall be the Owner's responsibility to have as-built information, such as pond volume, embankment size, and elevations, invert size and elevations, and spillway elevations, field surveyed by a Professional Land Surveyor. It shall be the engineer of record's responsibility to utilize the field surveyed information to fill out the As-Built Evaluation

and Certification Form. The Owner has two options for completing the As-Built Evaluation and Certification:

Option 1 The As-Built Evaluation and Certification form shall be submitted and approved by the City before the issuance of a Certificate of Occupancy (CO) and/or before the recording of the final subdivision plat.

Option 2 If the Owner would like to obtain a CO and/or record the final subdivision plat prior to the City's approval of the As-Built Evaluation and Certification form, the Owner may post a bond or other forms of surety acceptable to the City in the amount of 100% of the construction cost associated with post-construction stormwater management BMPs and the cost associated with the effort required to complete the As-Built Evaluation and Certification. The As-Built Evaluation and Certification form shall be submitted to the City within 120 days of receipt of a CO and/or recording of the final subdivision plat.

### **Annual Inspections**

In order for post-construction BMPs to continue to function in accordance with their original design and installation, annual inspections are required by the City's NPDES permit. The Owner of the project is required to have these annual inspections performed and must then submit the required Annual Inspection Form (Figure 5) to the City. The Annual Inspection Form shall provide documentation concerning the condition of each facility in terms of vegetative cover, erosion that may be occurring, the condition of inlets into the pond and the pond outlet, embankment conditions and any maintenance required and/or performed. The City shall evaluate the documentation submitted to confirm that the stormwater management facilities are continuing to function as designed.

The Annual Inspection Form shall be submitted to the City each year by 30 September.

## **Operation and Maintenance**

It is the responsibility of the Owner to operate and maintain the stormwater management facility and/or BMPs in accordance with the original design intent and approval. If the original Owner or Developer has sold the project or passed ownership on to a Homeowner's Association, then it is the new Owner or HOA's responsibility to maintain the facility and provide any required inspection and maintenance.

Should maintenance be needed at a facility as a result of the Annual Inspection, the Owner shall provide the City documentation of the maintenance required and a schedule for completing all maintenance activities. Once all maintenance activities are completed, the Owner shall provide documentation to the City of the maintenance performed and that the BMP operates as it was designed.

A summary of maintenance activities shall be submitted to the City each year by 30 September. The summary shall cover the previous fiscal year beginning 1 October through 30 September.

## **List of Figures**

Figure 1 – Existing Development Post Construction Stormwater Management Waiver Request Form

Figure 2 – Design Form, Detention / Retention Ponds

Figure 3 – Detention Pond Outlet Structure Example

Figure 4 – As-Built Evaluation and Certification Form

Figure 5 – Annual Inspection Form

# Figure 1- Existing Development

## Post Construction Stormwater Management Waiver Request Form

**City of Irondale** - Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: Approved  Incomplete  Other  NOTES: \_\_\_\_\_

Attachments: Master Plan  Basin Maps  H&H Calculations  Development Plan Approval

**Site Information** - Facility / Site Name: \_\_\_\_\_

Facility Street Address - \_\_\_\_\_ Latitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"

\_\_\_\_\_ Longitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"

Facility Contact: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Development Plan Approval on: \_\_\_\_\_ Total Area to be developed (acres): \_\_\_\_\_

Anticipated Date of Completion: \_\_\_\_\_ Area currently developed (acres): \_\_\_\_\_

Pond Type: Detention  Retention  Underground  Other  \_\_\_\_\_

Attachments: Master Plan  Basin Maps  H&H Calculations  Development Plan Approval

**Watershed** - \*Shades Creek  \*Cahaba River

\*Indicates a Proprietary watershed where streams have been included on a 303(d) list as impaired for sediment/siltation or have a Total Maximum Daily Load (TMDL) established for sediment/siltation.

### **Professional Engineer Certification:**

By affixing my professional seal and signature on this form, I hereby certify that the design for this development has been submitted to the City of Irondale on or before July 1, 2018 for review and approval. I further certify that the drainage areas shown in the hydrology and hydraulic (H&H) calculations and/or the attached maps do in fact drain into this facility and that the post-development runoff mimics pre-development hydrology in accordance with the City's stormwater management requirements in effect at the time the project was approved by the City.

Additional Information Attached

Company: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

## Figure 2 – Design Form Detention/ Retention Ponds

**City of Irondale** - Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: Approved  Incomplete  Other  NOTES: \_\_\_\_\_

Attachments: Narrative  Basin Maps  H&H Calculations  Development Plan Approval

LID Calculations

**Site Information** - Facility / Site Name: \_\_\_\_\_

Facility Street Address: \_\_\_\_\_

Facility Contact: \_\_\_\_\_ Phone Number: \_\_\_\_\_

**BMP Information**

Pond Type: Detention  Retention  Underground  Other  \_\_\_\_\_

LID BMP's: Bio retention  Permeable Pavement  Infiltration Swales  Other

Notes: \_\_\_\_\_

Attachments: Narrative  Basin Maps  H&H Calculations

**Watershed** - \*Shades Creek  \*Cahaba River

\*Indicates a Propriety watershed where streams have been included on a 303(d) list as impaired for sediment/siltation or have a Total Maximum Daily Load (TMDL) established for sediment/siltation.

**Pre-Development Conditions**

Pre-Development Basin:	Pre-1	Pre-2	Pre-3	Pre-4	Pre-5	Pre-6
Basin Drainage Area (Acres):	_____	_____	_____	_____	_____	_____
Curve Number:	_____	_____	_____	_____	_____	_____
Time of Concentration (Min.)	_____	_____	_____	_____	_____	_____
Peak discharge (ft <sup>3</sup> /s):	_____	_____	_____	_____	_____	_____
1.10" WQ vol.	_____	_____	_____	_____	_____	_____
4.20" WQ vol.	_____	_____	_____	_____	_____	_____
5.40" WQ vol.	_____	_____	_____	_____	_____	_____
6.20" WQ vol.	_____	_____	_____	_____	_____	_____
7.10" WQ vol.	_____	_____	_____	_____	_____	_____
8.60" WQ vol.	_____	_____	_____	_____	_____	_____



Figure 2 – Design Form Detention/ Retention Ponds

**Post-Development Conditions**

Post-Development Basin:	Pre-1	Pre-2	Pre-3	Pre-4	Pre-5	Pre-6
Basin Drainage Area (Acres):	_____	_____	_____	_____	_____	_____
Curve Number:	_____	_____	_____	_____	_____	_____
Time of Concentration (Min.)	_____	_____	_____	_____	_____	_____
Peak discharge (ft <sup>3</sup> /s):	_____	_____	_____	_____	_____	_____
1.10" WQ vol.	_____	_____	_____	_____	_____	_____
4.20" WQ vol.	_____	_____	_____	_____	_____	_____
5.40" WQ vol.	_____	_____	_____	_____	_____	_____
6.20" WQ vol.	_____	_____	_____	_____	_____	_____
7.10" WQ vol.	_____	_____	_____	_____	_____	_____
8.60" WQ vol.	_____	_____	_____	_____	_____	_____

**Riser and Principal Spillway**

Material: \_\_\_\_\_  
 Dimension: \_\_\_\_\_  
 Bottom El. \_\_\_\_\_  
 Top El. \_\_\_\_\_  
 Trash Rack: \_\_\_\_\_

	Shape	Size	Inv. El.
Orifice 1:	_____	_____	_____
Orifice 2:	_____	_____	_____
Orifice 3:	_____	_____	_____
Orifice 4:	_____	_____	_____

	Shape	Width	Inv. El.
Weir 1:	_____	_____	_____
Weir 2:	_____	_____	_____
Latitude:	_____°	_____'	_____"
Longitude:	_____°	_____'	_____"

**Emergency Spillway**

Material: \_\_\_\_\_  
 Shape: \_\_\_\_\_  
 Length: \_\_\_\_\_  
 Width: \_\_\_\_\_  
 Crest El.: \_\_\_\_\_  
 Top El.: \_\_\_\_\_  
 Latitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"  
 Longitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"

Please attach drawing/sketches or plans for detention or retention ponds to this form.

## Figure 2 – Design Form Detention/ Retention Ponds

Facility/Site Name: \_\_\_\_\_

Pond No.: \_\_\_\_\_ of \_\_\_\_\_

**Pond Stage area Storage Summary:** (Elevations measured in 1 foot increment

Elevation (ft)	Area (ft <sup>2</sup> )	Cumulative (ac-ft)	Elevation (ft)	Area (ft <sup>2</sup> )	Cumulative (ac-ft)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

**Pond Discharge Summary:**

Rainfall	Pond In-Q (cfs)	Pond Out-Q (cfs)	Max. Storage (ft)	Outlet Velocity (ft/s)
1.10"	_____	_____	_____	_____
4.20"	_____	_____	_____	_____
5.40"	_____	_____	_____	_____
6.20"	_____	_____	_____	_____
7.10"	_____	_____	_____	_____
8.60"	_____	_____	_____	_____

**Professional Engineer Certification:**

By affixing my professional seal and signature on this form, I hereby certify that this stormwater management facility provides the required water quality volume (WQ<sub>v</sub>) and is designed in accordance with the technical memorandum listed in the City of Irondale’s Post Construction Ordinance. I further certify that the drainage areas shown in the hydrology and hydraulic (H&H) calculations do in fact drain into this facility and that the post-development runoff mimics pre-development hydrology to the maximum extent practicable (MEP).

Company: \_\_\_\_\_

Seal: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

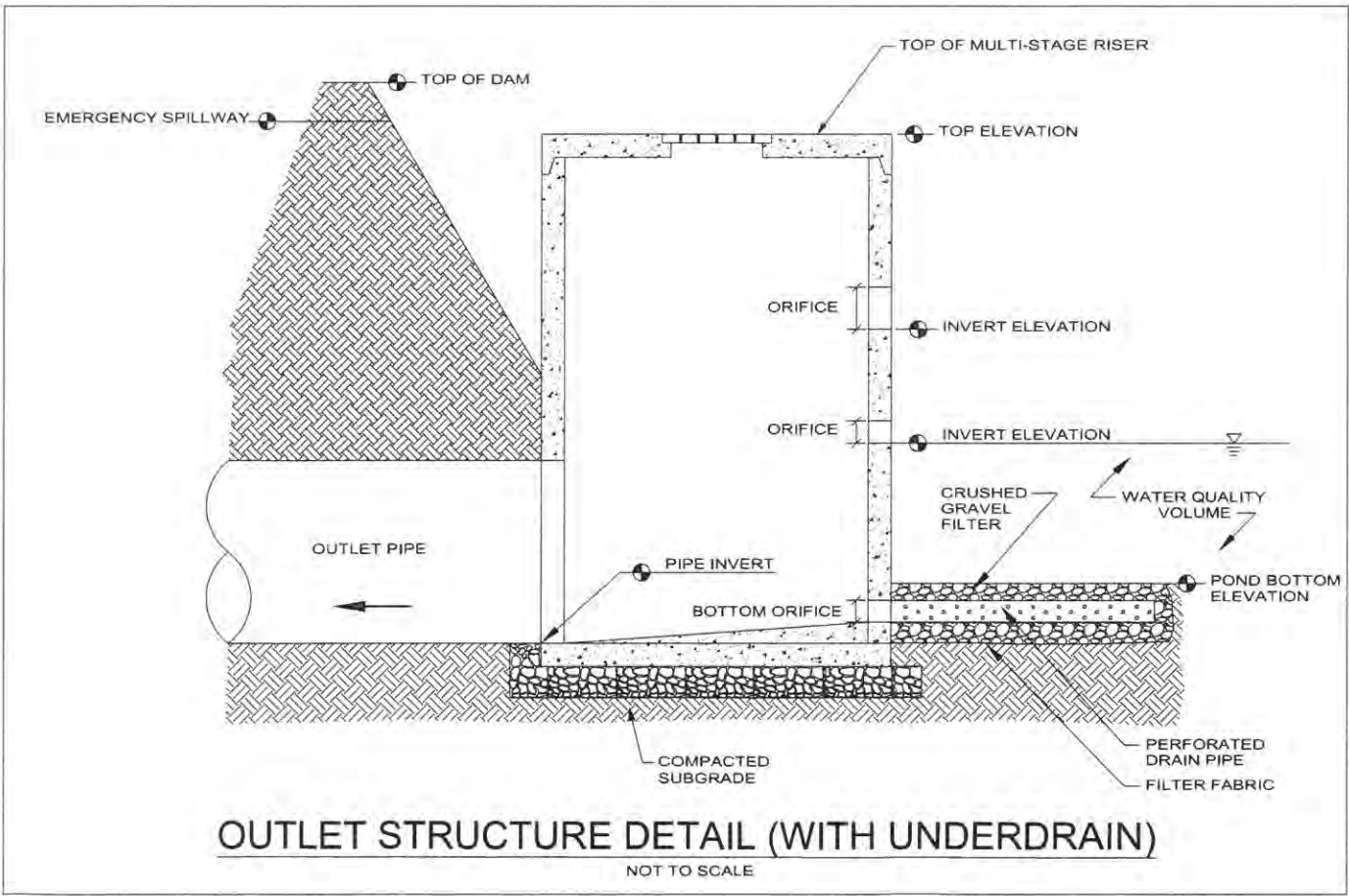
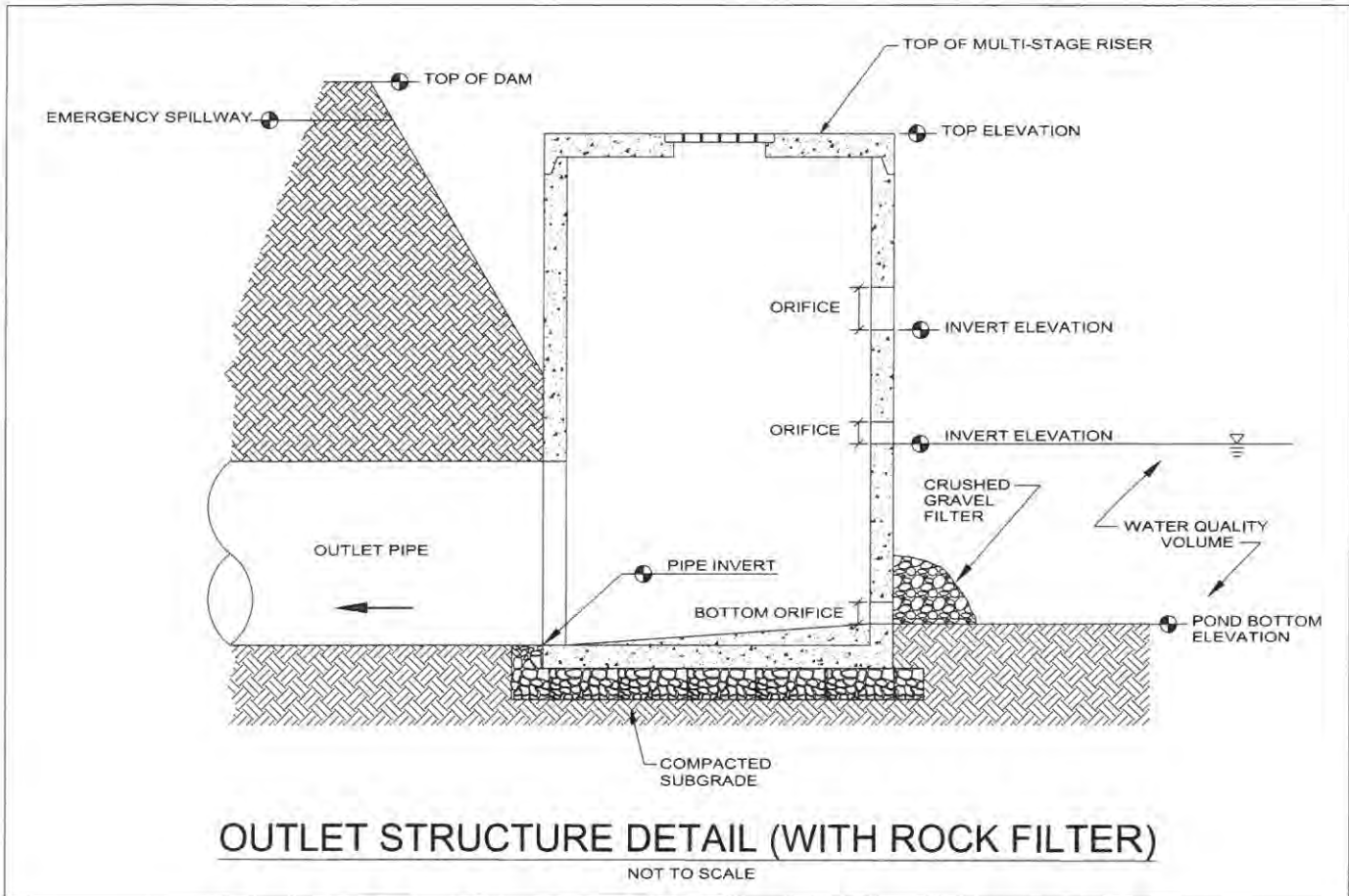


FIGURE 3 - DETENTION POND OUTLET STRUCTURE EXAMPLE



# Figure 4 As-Built Evaluation and Certification

Facility/Site Name: \_\_\_\_\_

## Riser and Principal Spillway

**Not Applicable**

<u>Design</u>	<u>As Built</u>																														
Material: _____	_____																														
Dimension: _____	_____																														
Bottom El. _____	_____																														
Top El. _____	_____																														
Trash Rack: _____	_____																														
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## Emergency Spillway

**Not Applicable**

<u>Design</u>	<u>As Built</u>
Material: _____	_____
Shape: _____	_____
Length: _____	_____
Width: _____	_____
Crest El.: _____	_____
Top El.: _____	_____
Latitude: _____° _____' _____"	Latitude: _____° _____' _____"
Longitude: _____° _____' _____"	Longitude: _____° _____' _____"

### **Comments:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Figure 4 – As-Built Evaluation and Certification

Facility/Site Name: \_\_\_\_\_ Pond No.: \_\_\_\_\_ of \_\_\_\_\_

**Pond Stage area Storage Summary:** (Elevations measured in 1 foot increments)

<u>Design Volume</u>			<u>As-Built Volume</u>		
Elevation (ft)	Area (ft <sup>2</sup> )	Cumulative (ac-ft)	Elevation (ft)	Area (ft <sup>2</sup> )	Cumulative (ac-ft)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

**Pond Discharge Summary:**

Rainfall	<u>Design</u>			<u>As-Built</u>	
	Pond In-Q(cfs)	Pond Out-Q(cfs)	Max. Storage(ft)	Outlet Velocity(ft/s)	Max Stage(ft)
1.10"	_____	_____	_____	_____	_____
4.20"	_____	_____	_____	_____	_____
5.40"	_____	_____	_____	_____	_____
6.20"	_____	_____	_____	_____	_____
7.10"	_____	_____	_____	_____	_____
8.60"	_____	_____	_____	_____	_____

**Professional Engineer Certification:**

By affixing my professional seal and signature on this form, I hereby certify that this stormwater management facility provides the required water quality volume (WQ<sub>v</sub>) and is designed in accordance with the technical memorandum listed in the City of Irondale’s Post Construction Ordinance. I further certify that the drainage areas shown in the hydrology and hydraulic (H&H) calculations do in fact drain into this facility and that the post-development runoff mimics pre-development hydrology to the maximum extent practicable (MEP).

Company: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_

Seal:

E-mail: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# Figure 5 Annual Inspection Form

**Irondale** – Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: Approved  Incomplete  Other  Notes: \_\_\_\_\_

Required Attachments: Photographs  Maintenance Summary

## **Owner Information:**

Facility Contact: \_\_\_\_\_

Company/HOA: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

## **Site Information:**

Facility/Site Name: \_\_\_\_\_

Address/Location: \_\_\_\_\_ Latitude: \_\_\_\_° \_\_\_\_' \_\_\_\_"

\_\_\_\_\_ Longitude: \_\_\_\_° \_\_\_\_' \_\_\_\_"

**Watershed** - \*Shades Creek  \*Cahaba River

\*Indicates a Propriety watershed where streams have been included on a 303(d) list as impaired for sediment/siltation or have a Total Maximum Daily Load (TMDL) established for sediment/siltation.

## **BMP Information**

Pond Type: Detention  Retention  Underground  Other  \_\_\_\_\_

LID BMP's: Bio retention  Permeable Pavement  Infiltration Swales  Other

Notes: \_\_\_\_\_

Attachments: Narrative  Basin Maps  Photographs

## **Comments:**

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# Figure 5 Annual Inspection Form

## **Inspection Observations:**

Latitude: \_\_\_\_° \_\_\_\_' \_\_\_\_"    Longitude: \_\_\_\_° \_\_\_\_' \_\_\_\_"

1. WQ<sub>v</sub> orifice and filter: Obstructed or damaged? \_\_\_\_\_
2. Staged orifices: obstructed or damaged? \_\_\_\_\_
3. Condition of vegetation or ground cover? \_\_\_\_\_
4. Excessive trash accumulated? \_\_\_\_\_
5. Emergency spillway clogged or damaged? \_\_\_\_\_
6. Riser and trash rack: Obstructed or damaged? \_\_\_\_\_
7. Excessive sediment accumulation? \_\_\_\_\_
8. LID BMPs require maintenance? \_\_\_\_\_

## **Maintenance Needed:**

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## **Follow-up actions:**

Follow-up actions required:     yes         No    If Yes, please explain: \_\_\_\_\_

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## **Professional Engineer Certification:**

By affixing my professional seal and signature on this form, I hereby certify that this stormwater management facility provides the required water quality volume (WQ<sub>v</sub>) and is being properly maintained in accordance with the technical memorandum listed in the City of Irondale's Post Construction Ordinance. In my professional opinion, the stormwater management facility is functioning as it was designed.

By affixing my professional seal and signature on this form, I hereby certify that this stormwater management facility requires the above described maintenance in order to provide the required water quality volume (WQ<sub>v</sub>) and/or to function as it was designed.

Company: \_\_\_\_\_

Seal:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**ORDINANCE 2018-13**

**STORMWATER MANAGEMENT AUTHORITY, INC.  
ILLCIT DISCHARGE ORDINANCE**

**RECITALS**

**Section 1  
DEFINITIONS**

**Section 2  
ADMINISTRATION**

**Section 3  
ILLCIT DISCHARGES PROHIBITIONS**

- Section 3.1 Prohibition of Illegal Discharges.
- Section 3.2 Illegal Discharge Exemptions.
- Section 3.3 Prohibition of Illicit Connections.

**Section 4  
SUSPENSION OF MS4 ACCESS**

- Section 4.1 Suspension Due to Illicit Discharges in Emergency Situations.
- Section 4.2 Suspension Due to the Detection of Illicit Discharge.
- Section 4.3 Post Construction BMP Operation and Maintenance Plan Description.

**Section 5  
INDUSTRIAL OR CONSTRUCTION ACTIVITY DISCHARGES**

**Section 6  
MONITORING OF DISCHARGES**

**Section 7  
REQUIREMENT TO PREVENT, CONTROL, AND REDUCE STORM WATER  
POLLUTANTS BY THE USE OF BEST MANAGEMENT PRACTICES**

**Section 8  
WATERCOURSE PROTECTION**

**Section 9  
NOTIFICATION OF SPILLS**

**Section 10**  
**ENFORCEMENT AND ABATEMENT**

- Section 10.1 Notice of Violation.
- Section 10.2 Appeal of Notice of Violation.
- Section 10.3 Enforcement Measures After Appeal.
- Section 10.4 Cost of Abatement of the Violation.
- Section 10.5 Injunctive Relief.
- Section 10.6 Compensatory Action.
- Section 10.7 Violations Deemed a Public Nuisance.
- Section 10.8 Criminal Prosecution.
- Section 10.9 Remedies Not Exclusive.

**Section 11**  
**MISCELLANEOUS**

- Section 11.1 Applicability.
- Section 11.2 Severability.
- Section 11.3 Ultimate Responsibility.
- Section 11.4 Effective Date.

# STORM WATER MANAGEMENT ILLCIT DISCHARGE

## RECITALS

**WHEREAS**, the purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of **IRONDALE** through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law.

**WHEREAS**, this ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit process.

**WHEREAS**, this ordinance provides the minimum content for implementing and enforcing a STORMWATER management consistent with the Alabama Department of Environmental Management (ADEM) permit currently issued to the **IRONDALE**.

**WHEREAS**, the objectives of this ordinance are:

1. To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by STORMWATER discharges by any user
2. To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system
3. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance

**NOW, THEREFORE BE IT ORDAINED** by the City Council of the Irondale, Alabama, as follows:

### **Section 1 DEFINITIONS**

For the purposes of this ordinance, the following words and terms shall have the meaning assigned to them in this section.

Authorized enforcement agency: employees or designees of the director of the municipal agency designated to enforce this ordinance.

Best Management Practices (BMPs): schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to STORMWATER, receiving waters, or STORM WATER conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Clean Water Act. The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

Construction Activity. Activities subject to NPDES Construction Permits. Currently, these include construction projects resulting in land disturbance of 1 acre or more. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Hazardous Materials. Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illegal Discharge. Any direct or indirect non-storm water discharge to the storm drain system, except as exempted in Section X of this ordinance.

Illicit Connections. An illicit connection is defined as either of the following:

1. Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by the **IRONDALE** or,
2. Any drain or conveyance connected from commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by the **IRONDALE**.

Industrial Activity. Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26 (b) (14).

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit. Means a permit issued by EPA (or by a State under authority delegated under 33 USC § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

Non-Storm Water Discharge. Any discharge to the storm drain system that is not composed entirely of stormwater.

Person. Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

Pollutant. Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Premises. Any building, lot, parcel of land, or a portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Storm Drainage System. Publicly-owned facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Storm Water. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Storm Water Pollution Prevention Plan. A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to STORMWATER, STORMWATER Conveyance Systems, and/or Receiving Waters to the Maximum Extent Practicable.

Wastewater means any water or other liquid, other than uncontaminated storm water, discharged from a facility.

## **Section 2 ADMINISTRATION**

The **IRONDALE** shall administer, implement, and enforce the provisions of this ordinance. Any powers granted or duties imposed upon the **IRONDALE** may be enforced by \_\_\_\_\_ or delegated in writing by an official of the **IRONDALE** to persons or entities acting in the beneficial interest of or in the employ of the agency.

## **Section 3 ILLICIT DISCHARGE PROHIBITIONS**

### **Section 3.1 Prohibition of Illegal Discharges.**

No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater.

### **Section 3.2 Illegal Discharges Exemptions.**

The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

The following discharges are exempt from discharge prohibitions established by this ordinance provided that they have been determined not to be a substantial contributor of pollutants by the City or Alabama Department of Environmental Management (ADEM):

- a) Water line flushing
- b) Landscape irrigation or lawn watering (not consisting or treated, or untreated wastewater unless otherwise authorized)
- c) Diverted stream flows
- d) Uncontaminated ground water infiltration
- e) Uncontaminated pumped groundwater
- f) Discharges from potable water sources
- g) Foundation or footing drains (not including active groundwater dewatering systems)
- h) air conditioning condensation or drains
- i) Irrigation water (not consisting or treated, or untreated wastewater unless otherwise authorized)
- j) Rising groundwater
- k) Springs
- l) Water from crawl space pumps
- m) Lawn watering runoff
- n) Individual residential car washing, to include charitable carwashes
- o) Residential street wash water
- p) Discharges or flows from firefighting activities (including fire hydrant flushing)
- q) Flows from natural riparian habitat or wetlands
- r) Dechlorinated swimming pool discharges
- s) Dye testing is an allowable discharge but requires a verbal notification to the **IRONDALE** before the time of the test.

### **Section 3.3 Prohibition of Illicit Connections.**

- a) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.
- b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.



- c) A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

#### **Section 4 SUSPENSION OF MS4 ACCESS**

##### **Section 4.1 Suspension Due to Illicit Discharges in Emergency Situations.**

The **IRONDALE** may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or the health or welfare of persons, or the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the **IRONDALE** may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

##### **Section 4.2 Suspension Due to the Detection of Illicit Discharge.**

Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The **IRONDALE** will notify a violator of the proposed termination of its MS4 access. The violator may petition the **IRONDALE** for a reconsideration and hearing.

A person commits an offense if the person reinstates MS4 access to premises terminated under this Section, without the prior approval of the **IRONDALE**.

#### **Section 5 INDUSTRIAL, COMMERCIAL OR CONSTRUCTION ACTIVITY DISCHARGES**

Any person subject to an industrial, commercial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with a said permit may be required in a form acceptable to the **IRONDALE** before the allowing of discharges to the MS4.

#### **Section 6 MONITORING OF DISCHARGES**

##### **Section 6.1 Applicability.**

This section applies to all facilities that have stormwater discharges associated with industrial, commercial, and construction activity.

## Section 6.2 Access to Facilities.

- a) The **IRONDALE** shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the **IRONDALE**.
- b) Facility operators shall allow the **IRONDALE** ready access to all parts of the premises for the purposes of inspection, sampling, examination, and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.
- c) The **IRONDALE** shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the **IRONDALE** to conduct monitoring and/or sampling of the facility's stormwater discharge.
- d) The **IRONDALE** has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure **STORMWATER** flow, and quality shall be calibrated to ensure their accuracy.
- e) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the **IRONDALE** and shall not be replaced. The costs of clearing such access shall be borne by the operator.
- f) Unreasonable delays in allowing the **IRONDALE** access to a permitted facility is a violation of a stormwater discharge permit and of this ordinance. A person who is the operator of a facility with an NPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies the **IRONDALE** reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.
- g) If the **IRONDALE** has been refused access to any part of the premises from which **STORMWATER** is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the **IRONDALE** may seek issuance of a search warrant from any court of competent jurisdiction.



**Section 7**  
**REQUIREMENT TO PREVENT, CONTROL, AND REDUCE STORMWATER POLLUTANTS BY THE USE OF BEST MANAGEMENT PRACTICES**

**IRONDALE** will adopt requirements identifying Best Management Practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a STORMWATER pollution prevention plan (SWPP) as necessary for compliance with the requirements of the NPDES permit.

**Section 8**  
**WATERCOURSE PROTECTION**

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. Also, the owner or lessee shall maintain existing privately-owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

**Section 9**  
**NOTIFICATION OF SPILLS**

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system or water of the U.S. said person should take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the **IRONDALE** in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the **IRONDALE** within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such

records shall be retained for at least three years.

## **Section 10 ENFORCEMENT AND ABATEMENT**

Whenever the **IRONDALE** finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the **IRONDALE** may enforce the ordinance with escalating procedures.

### **Section 10.1 Notification; Enforcement Remedies.**

- (a) Warning Notice: A warning notice of violation is the lowest level of formal response to a violation. It is a verbal or written response presented to the violator shortly after a violation has been identified and is intended for minor violations that would not cause significant harm to the environment.
  
- (b) Notification of Violation: Whenever the Official finds that any person is in violation of any provision of this ordinance, or any order issued hereunder, the Official or his agent may serve upon such person written notice of the violation requiring the removal of illicit discharges and immediate cessation improper disposal practices within ten (10) calendar days of the date of such notice. Compliance by written notice of violation to the responsible person may require without limitation:
  - 1. The performance of monitoring, analyses, and reporting;
  - 2. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property; and
  - 3. Payment of a fine to cover administrative and remediation costs; and
  - 4. The implementation of source control or treatment BMPs.
  
- (c) Compliance Order: Whenever abatement of a violation and/or restoration of the affected property is not possible within ten (10) days, a compliance order may be issued to the violator. The order shall set forth a deadline within which such remediation or restoration must be completed. Said order shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor, and the expense thereof shall be charged to the violator.

### **Section 10.2 Appeal of Violation.**

Any person receiving a Notice of Violation or Compliance Order may appeal the determination of the **IRONDALE**. The notice of appeal must be received within ten (10) days from the date of the Notice of Violation/Compliance Order. Hearing on the appeal before the appropriate authority or his/her designee shall take place within fifteen (15) days from the date of receipt of the notice of appeal. The decision of the municipal authority or

their designee shall be final.

### **Section 10.3 Enforcement Measures After Appeal.**

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, within **thirty (30) days** of the decision of the municipal authority upholding the decision of the **IRONDALE**, then representatives of the **IRONDALE** shall enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

### **Section 10.4 Cost of Abatement of the Violation.**

Within \_\_\_\_\_ days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within \_\_\_\_\_ days. If the amount due is not paid within a timely manner as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

Any person violating any of the provisions of this ordinance shall become liable to the city by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of twelve (12) percent per annum shall be assessed on the balance beginning on the 1st day following the discovery of the violation.

### **Section 10.5 Injunctive Relief.**

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. If a person has violated or continues to violate the provisions of this ordinance, the **IRONDALE** may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

### **Section 10.6 Compensatory Action.**

In lieu of enforcement proceedings, penalties, and remedies authorized by this Ordinance, the **IRONDALE** may impose upon a violator alternative compensatory actions, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, etc.

### **Section 10.7 Violations Deemed a Public Nuisance.**

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Ordinance is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

### **Section 10.8 Criminal Prosecution.**

Any person that has violated or continues to violate this ordinance shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to a criminal penalty of \$500 dollars per violation per day and/or imprisonment for a period of time not to exceed one hundred and eighty (180) days.

The **IRONDALE** may recover all attorney's fees court costs and other expenses associated with the enforcement of this ordinance, including sampling and monitoring expenses.

### **Section 10.9 Remedies Not Exclusive.**

The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the **IRONDALE** to seek cumulative remedies.

## **Section 11 MISCELLANEOUS**

### **Section 11.1 Applicability.**

This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an **IRONDALE**.

### **Section 11.2 Severability.**

The provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Ordinance.

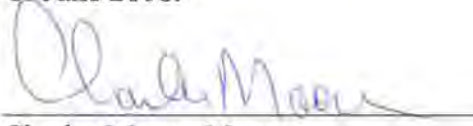
### **Section 11.3 Ultimate Responsibility.**

The standards set forth herein and promulgated pursuant to this ordinance are minimum standards; therefore, this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

**Section 11.4 Effective Date.**

This ordinance shall be published as required by law and shall become effective on June 7, 2018.

**ADOPTED & APPROVED** this the 7<sup>th</sup> day of June 2018.

  
\_\_\_\_\_  
Charles Moore, Mayor

**CERTIFICATION**

I, James D. Stewart Jr., City Clerk of the City of Irondale, Alabama, hereby certifies the above to be a true and correct copy of a resolution adopted by the City Council of the City of Irondale at its regular meeting held on June 7, 2018, as same appears in the minutes of record of said meeting.

**ATTEST:**

  
\_\_\_\_\_  
James D. Stewart Jr., City Clerk



2011

Guidelines and Standard  
Operating Procedures



# Chapter 1

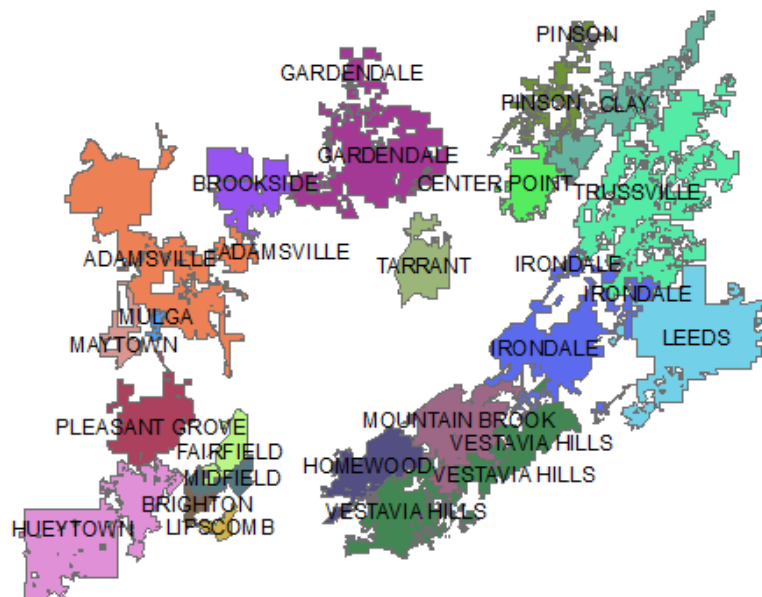
## I. INTRODUCTION

*The Introduction section describes the regulatory basis, overall organization, and intended audience of the Manual.*

### 2.1 BASIS FOR THE MANUAL

In October 2001, The Alabama Department of Management (ADEM) in accordance with the Environmental Protection Agency (EPA) issued a National Pollutant Discharge Elimination System (NPDES) for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). The 21 municipalities comprising the Storm Water Management Authority, Inc became subject to stormwater Phase I regulations based on their designation as high-density urbanized areas according to the 2000 US Census. See Figure 1-1 for a map of the regulated municipalities.

**Figure 1-1: Storm Water Management Authority, Inc Municipalities**



The regulation specifies that a new general permit be issued by ADEM on a revolving five year basis. The General permit is valid until the new permit is issued and requires each municipality to develop a five year plan to:

*“(R)educe the discharge of pollutants from the MS4 to the maximum extent practicable; protect water quality, and satisfy the water quality requirements of the Clean Water Act and state water quality standards.”*

The 21 municipalities decided to best meet the goals of the permit that a uniform organization, Storm Water Management Authority, Inc, Inc. (Storm Water), would need to be formed. In September 2009, the members of Storm Water contracted with the Jefferson County Department of Health to perform certain stormwater duties for each municipality. The municipalities incorporated into Storm Water before this Manual did not have written standardized procedures for carrying out municipal operations that pertain to the management of stormwater. This Manual is the creation of such a standardization that provides a commonly accepted framework, technical standards, and guidance on stormwater management measures that control the quantity and quality of stormwater produced from common municipal activities. This Manual will aid in helping a communities’ Illicit Discharge Detection and Elimination (IDDE) program and provide a basis for future employee training

This manual will not only provide assistance to municipalities to meet the Stormwater Phase I regulations, but encourages them to use targeted best management practices (BMPs) within the watershed with the long-term goal of consistent application by all regulated entities within the watershed. The Manual of Guidelines and Standard Operating Procedures will help promote improvement in the water quality of Jefferson County’s lakes, ponds, streams, and rivers.

## **2.2 OBJECTIVES OF THE MANUAL**

The specific objectives of the Manual are to

- Provide a uniform set of technical standards and guidance on stormwater management measures that will control both the quantity and quality of stormwater produced by municipal activities, new development, redevelopment, and post-construction;
- Assist municipalities in meeting Stormwater Phase I requirements;



- Encourage the use of uniform BMP strategies with the long term goal of consistent application by all regulated entities within the watershed;
- Encourage municipal cost-savings through proper and timely maintenance of stormwater systems; and
- Promote behavior that will improve the water quality throughout Jefferson County

### **2.3 CONTENT OF THE MANUAL**

The content of this Manual is based primarily on the select requirements of the Stormwater Phase I program. The five year plan for each community must address the following control measures:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Industrial Inspection Program
5. Construction Site Stormwater Runoff Control
6. Post-Construction Stormwater Management in New Development and Redevelopment
7. Pollution Prevention/Good Housekeeping for municipal operations
8. Promotion of Green Development
9. Roadway Procedures
10. Pesticide, Herbicide, and Fertilizer Application
11. Flood Control Projects
12. Spill Prevention and Response

This Manual addresses components for two of the minimum control measures, Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping, as follows:

Illicit Discharge Detection and Elimination (IDDE) – This Manual describes the procedures that are used to develop the IDDE program for the MS4s in the 21 municipalities covered under the permit. The program is based on the specific needs of each municipality and the watershed it falls within. This Manual offers the outline of the steps used by JCDH to develop an overall IDDE program that is implemented by each municipality. The basic steps currently underway by JCDH are: 1) Location of priority areas likely to have illicit discharges 2) Mapping of all storm drain systems 3) implementing an illicit discharge detection program through dry screening and outfall monitoring 4) Developing uniform procedure to trace sources of illicit discharging 5) Developing

procedures to remove sources, and 6) Evaluating overall IDDE program effectiveness. This Manual provides information on each of the six steps currently being deployed by JCDH, and how they result in an effective IDDE program that fulfills the intent of the General Permit.

Pollution Prevention/Good Housekeeping for Municipal Operations –

This Manual provides the Program Manager and municipal staff with the resources and technical references to aid Jefferson County Department of Health and Storm Water Management Authority, Inc in implementing their own Pollution Prevention/Good Housekeeping program. The General Permit requires the following Pollution Prevention/Good Housekeeping components as part of the overall plan:

- a) *A program with a goal of preventing and/or reducing pollutant runoff from municipal operations. The program will include employee training through Jefferson County Department of Health in cooperation with the Storm Water Management Authority, Inc.*
- b) *Maintenance activities for the following: parks and open spaces (area such as public golf courses and athletic fields); fleet maintenance, building maintenance; new construction and land disturbance; roadway drainage system maintenance and storm sewer maintenance.*
- c) *Schedules and records for municipal maintenance activities in paragraph (b) above.*
- d) *Inspection procedures and schedules for long term structural controls.*

This approach allows for flexibility in communities that are in the Stormwater Management Authority to develop their own unique programs according to community needs and available resources.

## **2.4 MANUAL AUDIENCE AND ORGANIZATION**

The Stormwater Phase I Program requires the development of new programs as well as training for municipal employees to implement the overall stormwater program during daily activities. For this reason the Manual addresses two distinct types of audiences (1) City Engineers; JCDH personnel; City Officials, and (2) municipal employees, such as public works personnel, who implement the programs on a day-to-day basis.

Chapter 1 will provide an introduction and overview of the Manual. Chapter 2, *Illicit Discharge Detection and Elimination*, presents procedures for City Engineers, JCDH personnel, and City Officials to use in identifying high priority areas, tracing illicit discharges, and

eliminating illicit discharges in a timely manner. Chapter 3, *Pollution Prevention and Good Housekeeping*, provides the general details on the many ways that municipal activities such as vehicle and facilities maintenance may adversely affect stormwater, and presents ways to modify municipal operations to better prevent and reduce stormwater pollution.

Chapter 3 also gives some details on how to develop procedures related to good housekeeping and pollution prevention.

The Appendices are intended for use by “in-the-field” municipal employees. Appendix A contains some guidelines and standard operating procedures (SOPs) employed by Storm Water Management Authority, Inc and JCDH for use in the detection and elimination of illicit discharges. Appendix B contains guidelines, SOPs, and forms to use in applying pollution prevention and good housekeeping techniques during regular work duties.

The guidelines will be divided into three categories to make them easier for all users. These categories are: Always, whenever possible, and Never. Facility Managers are encouraged to keep up with any changes that occur in specific regulatory compliances with any SOPs in this Manual and should contact Storm Water Management Authority, Inc accordingly. Specific training on the guidelines and SOPs will help to reinforce their importance and encourage implementation.

## **2.5 COMMON STORMWATER POLLUTANTS, SOURCES, AND IMPACTS**

Stormwater runoff contains pollutants that can harm human health, degrade water quality and aquatic habitat, impair water recreational activities, and impair ecosystem functions. On its way into our local streams, rivers, and other receiving waterbodies, stormwater runoff accumulates pollutants such as oil, gas, and other hydrocarbons, heavy metals, deicers, pesticides, fine sediment, fertilizers and bacteria(pathogens), all of which cause impairment to water quality. Runoff from fertilized lawns, golf courses, right-of-ways, and city parks can contribute excess nutrients to waterbodies, which can lead to algal blooms and in extreme cases, fish kills events due to low dissolved oxygen levels. Elevated fecal coliform from sewage or other sources can impair water quality and can lead to restrictions on use and enjoyment of natural resources such as fishing and swimming areas. Other stormwater pollutants of concern are toxic contaminants, such as heavy metals, mercury, pesticides, which can come from vehicles, businesses, or from homeowner activities.

All of these pollutants can be dissolved in water and can wash into receiving bodies during storm events. Understanding the sources of these pollutants and the impacts each pollutant has can help identify the priority goals and objectives of your specific municipality. Table 1-1 summarizes common stormwater pollutants, their sources and potential impacts.

<b>TABLE 1-1: COMMON STORMWATER POLLUTANTS, SOURCES AND IMPACTS</b>		
<b>Pollutant</b>	<b>Sources</b>	<b>Impact</b>
Sediment	Construction sites; eroding stream banks and lakeshores; winter sand and salt application; vehicle/boat washing; agricultural sites.	Destruction of plant and fish habitat; transportation of attached oils, nutrients and other pollutants; increased maintenance costs, flooding.
Nutrients (phosphorus, nitrogen)	Fertilizers; malfunctioning septic systems; livestock, bird & pet waste; vehicle/boat washing; grey water; decaying grass and leaves; sewer overflows; leaking trash containers, leaking sewer lines.	Increased potential for nuisance or toxic algal blooms; increased potential for hypoxia/anoxia (low levels of dissolved oxygen which can kill aquatic organisms).
Hydrocarbons (petroleum compounds)	Vehicle and equipment leaks; vehicle and equipment emissions; pesticides; fuel spills; equipment cleaning; improper fuel storage & disposal.	Toxic to humans and aquatic life at low levels.
Heavy Metals	Vehicle brake and tire wear; vehicle/equipment exhaust; batteries; galvanized metal; paint and wood preservatives; batteries; fuels; pesticides; cleaners.	Toxic at low levels; drinking water contamination.
Pathogens (Bacteria)	Livestock, bird and pet wastes; malfunctioning septic systems; sewer overflows; damaged sanitary lines.	Risk to human health leading to closure of shellfish areas and swimming areas; drinking water contamination.

USEPA defines an illicit discharge as any discharge to an MS4 that is not composed entirely of stormwater or the allowable non-stormwater discharges such as water from fire fighting activities, infiltrating groundwater, etc.. (See list below).

#### Allowable Non-Stormwater Discharges

1. Water line flushing
2. Landscape irrigation
3. Diverted stream flows
4. Rising ground waters
5. Uncontaminated ground water infiltration (as defined in 40 CFR 35.2005 (20))
6. Uncontaminated pumped ground water
7. Discharge from potable water source
8. Foundation drains
9. Air conditioning condensation
10. Irrigation water, springs
11. Water from crawl space pumps
12. Footing drains
13. Lawn watering
14. Individual resident car washing
15. Flows from riparian habitats and wetlands
16. Dechlorinated swimming pool discharges
17. Street wash water
18. Residential building wash waters, without detergents

# Chapter 2

## II. ILLICIT DISCHARGE DETECTION AND ELIMINATION

In our communities, the municipal separate storm drain systems discharge to receiving waterbodies without treatment. Therefore, it is particularly important that only stormwater is discharged and to ensure that illicit discharges are eliminated from the system. The General Permit requires that an effective IDDE program be developed by the regulated municipalities. The use of SOPs by JCDH and Storm Water Management Authority, Inc will allow for a unified approach to formulating an effective IDDE program. The Center for Watershed Protection's (CWP) *Illicit Discharge Detection and Elimination- A Guidance Manual for Program Development and Technical Assessments* (2004) , the New England Interstate Water Pollution Control Commission's (NEIWPC) *Illicit Discharge Detection and Elimination Manual- A Handbook for Municipalities* (2003) , and *Guidelines and Standard Operating Procedures- Illicit Discharge Detection and Elimination and Pollution Prevention/ Good Housekeeping* were used to develop this chapter.

This chapter provides some procedures that are being employed or deemed necessary to create an effective IDDE program in accordance with the USEPA General Permit. City officials should have a good understanding of the types of illicit discharges that may be encountered and the proper procedures and roles that are deployed by Storm Water Management Authority, Inc, JCDH, and the local municipality to address the problems. Section 2.1 describes various types of illicit discharges that may be encountered throughout Jefferson County. The next sections address additional steps that can be taken or are currently underway to create an effective IDDE program. The subsequent sections will then address additional steps that are being taken by Storm Water Management Authority, Inc, Inc. and JCDH to create an effective IDDE program such as: locating priority areas within Jefferson County (Section 2.2), storm-drain mapping (Section 2.3), detecting illicit discharges (Section 2.4), tracing illicit discharges back to its source (Section 2.5), removing illicit

discharges (Section 2.6), and tracking illicit discharges (Section 2.7). Lastly, Section 2.8 provides an approach to evaluating the overall IDDE program.

## 2.1 TYPES AND SOURCES OF ILLICIT DISCHARGES

The USEPA defines an illicit discharge as *“any discharge to a regulated small MS4 or to the waters of the State of Alabama that does not consist entirely of stormwater or allowable non-stormwater discharges”*.

Illicit discharges are often categorized according to frequency, which provides information about the source and helps determine which tracing procedures may be useful in locating the discharge. The following three categories provide a good basis for defining illicit discharges:

1. Transitory illicit discharges are typically single occurrence events resulting from spills, breaks, dumping or accidents. Transitory illicit discharges are often reported to an authority through the JCDH Stormwater Hotline (205) 930-1999, the local municipality, or through a municipal or JCDH employee observation while performing regular duties. Because they are not recurring, they are the most difficult to identify, trace, and remove. The best methods to reduce transitory discharges is through the use of education to the general public, municipal response personnel, tracking of discharge locations, and enforcement of an illicit discharge ordinance.
2. Intermittent illicit discharges occur occasionally over a period of time (several hours per day, or a few days per year). Intermittent discharges can result from legal connections to the storm drain system, such as a legal sump pump connection that is illegally discharging anything other than groundwater. Intermittent discharges can also result from activities such as a drum washing in exterior areas. These types of discharges are more likely to be discovered, and are less difficult to trace and remove, but can still present significant challenges. These discharges can have large or small impacts on waterbodies depending on pollutant content, duration, and the size of the receiving water body.
3. Continuous illicit discharges are typically the result of direct connection from a sanitary sewer, overflow from a malfunctioning septic system, inflow from a connection from a commercial or industrial facility. Continuous illicit discharges are usually easiest to trace and can have substantial pollutant loads. (CWP 2004).

Land use should be a major contributing factor when looking for illicit discharges. Table 2-1 provides a list of conditions and activities that may produce transitory and intermittent discharge, along with associated sources and land use. Table 2-2 lists possible sources of continuous discharges and their associated land use.

<b>TABLE 2-1:</b> LAND USES, LIKELY SOURCE LOCATIONS AND ACTIVITIES THAT CAN PRODUCE TRANSITORY OR INTERMITTENT ILLICIT		
<b>Land Use</b>	<b>Likely Source Locations</b>	<b>Condition or Activity that Produces Discharge</b>
Residential	<ul style="list-style-type: none"> <li>• Apartments</li> <li>• Multi-family</li> <li>• Single family detached</li> </ul>	<ul style="list-style-type: none"> <li>• Driveway cleaning</li> <li>• Dumping/spills (e.g., leaf litter and RV/boat holding tank effluent)</li> <li>• Equipment/vehicle wash-downs</li> <li>• Septic system maintenance</li> <li>• Swimming pool discharges</li> </ul>
Commercial	<ul style="list-style-type: none"> <li>• Campgrounds/RV parks</li> <li>• Car dealers/rental car companies</li> <li>• Car washes</li> <li>• Commercial laundry/dry cleaning</li> <li>• Gas stations/auto repair shops</li> <li>• Marinas</li> <li>• Nurseries and garden centers</li> </ul>	<ul style="list-style-type: none"> <li>• Building maintenance (power washing)</li> <li>• Dumping/spills</li> <li>• Landscaping/grounds care</li> <li>• Outdoor fluid storage</li> <li>• Parking lot maintenance (power washing)</li> <li>• Vehicle fueling</li> <li>• Vehicle maintenance/repair</li> <li>• Vehicle washing</li> <li>• Wash-down of greasy equipment and grease traps</li> </ul>

Industrial	<ul style="list-style-type: none"> <li>• Auto recyclers</li> <li>• Beverages and brewing</li> <li>• Construction vehicle washouts</li> <li>• Distribution centers</li> <li>• Food processing</li> <li>• Garbage truck washouts</li> <li>• Marinas, boat building and repair</li> <li>• Metal plating operations</li> <li>• Paper and wood products</li> <li>• Petroleum storage and refining</li> <li>• Printing</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial process water or rinse water</li> <li>• Loading and un-loading area wash-downs</li> <li>• Outdoor material storage</li> </ul>
Municipal	<ul style="list-style-type: none"> <li>• Airports</li> <li>• Landfills</li> <li>• Maintenance depots</li> <li>• Municipal fleet storage areas</li> <li>• Ports</li> <li>• Public works yards</li> <li>• Streets and highways</li> <li>• Golf courses</li> <li>• Schools</li> </ul>	<ul style="list-style-type: none"> <li>• Building maintenance (power washing)</li> <li>• Dumping/spills</li> <li>• Landscaping/grounds care</li> <li>• Outdoor fluid storage</li> <li>• Parking lot maintenance (power washing)</li> <li>• Road maintenance</li> <li>• Emergency response</li> <li>• Vehicle fueling</li> <li>• Vehicle maintenance/repair</li> <li>• Vehicle washing</li> <li>• Aircraft deicing</li> </ul>

<b>TABLE 2-2:</b> LAND USES, LIKELY SOURCE LOCATIONS AND ACTIVITIES THAT CAN PRODUCE <u>CONTINUOUS</u> ILLICIT DISCHARGES	
Land Use	Condition or Activity that Produces Discharge
Residential	<ul style="list-style-type: none"> <li>• Failed sanitary sewer infiltrating into storm drain</li> <li>• Sanitary sewer connection into storm drain</li> <li>• Failed septic systems discharging to storm drain system</li> </ul>
Commercial/Industrial	<ul style="list-style-type: none"> <li>• Failed sanitary sewer infiltrating into storm drain</li> <li>• Process water connections into storm drain</li> <li>• Sanitary sewer connection into storm drain</li> </ul>
Municipal	<ul style="list-style-type: none"> <li>• Failed sanitary sewer infiltrating into storm drain</li> <li>• Sanitary sewer connection into storm drain</li> </ul>

*SOURCE (Tables 2-1 and 2-1) : Modified from Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and*



*Technical Assessments, Center for Watershed Protection, 2004. p.12, Table 2.*

The illicit discharge detection system provided by Storm Water Management Authority, Inc, Inc and JCDH uses these criteria to provide an effective detection and elimination program to address all types of illicit discharges.

## **2.2 LOCATING PRIORITY AREAS**

Section 2.2 provides the methodology for locating priority areas that have a high potential for illicit discharges. Storm Water Management Authority, Inc, Inc and JCDH are continually evaluating/improving this process as changes arise and illicit discharges are removed (described in Section 2.6) This allows for a continuous modeling approach on where illicit discharge detection assets should be placed.

To locate priority areas within our municipalities JCDH is:

1. Continually monitoring watersheds for any substantial changes such as local water quality classifications (303 d and various others) by using current water quality monitoring for trending data. This helps divide the watershed into discrete areas that can obtain different priority levels.
2. Gathering and evaluating available information that provide clues as to where in the community illicit discharges might be found (e.g. older neighborhoods, industrial parks, and gentrified neighborhoods). This is done by taking data from ADEM issued NPDES permits, Sanitary Sewer Overflows, Land usage, and outfall quantity and type and plotting them using Geographical Information System (GIS) mapping technology. The maps are then examined for areas where concentrations of all these components tend to occur.
3. Using existing information to assess where illicit discharges may be found and what waterbodies are particularly sensitive (e.g. , drinking water sources, areas containing unique biodiversity, and swimming areas).

The following subsections present further discussion on each of these areas. The mapping and watershed prioritization conducted by Storm Water Management Authority, Inc, Inc and JCDH will help to manage each of these areas.

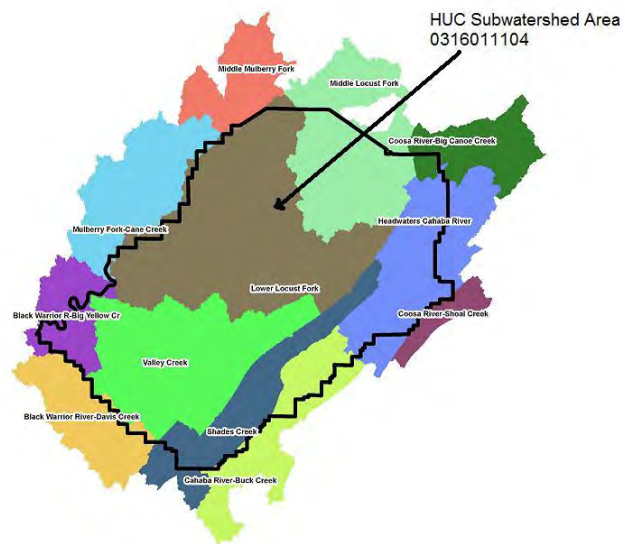
Natural Resource  
Conservation Service (NCRS)  
HUC

Level	Name	Number
1	Region	2 digit
2	Sub-Region	4 digit
3	Basin	6 digit
4	Sub-basin	8 digit
5	Watershed	10 digit
6	Subwatershed	12 digit
7	Drainage	14 digit
8	Site	16 digit

2.2.1 Identify Watersheds and Waterbodies

In order to identify priority areas where illicit discharges may occur, a decision must be made as to how to define an “area”. The Center for Watershed Protection recommends defining watersheds for individual waterbodies. The National Hydrograph Dataset has a Hydrologic Unit Code (HUC 10) that is used throughout Jefferson County. These 10 digit HUC codes provide an overall framework for delineating the 11 watershed areas within Jefferson County.

Figure 2-1 : Jefferson County HUC 10 Watersheds



This approach is particularly useful when reviewing the 303(d) list of impaired waters. Although wetlands are not taken into the HUC coding program they are taken into account in any water resource planning.

2.2.2 Review Available Information

Priority areas for our overall IDDE program will vary from one municipality to another depending on water quality conditions, land use, etc. The following is a list of resources that is compiled on a continual basis as well as a brief description of the factors used in the prioritization process:

- GIS land use maps - industrial areas with high density development may have a high potential to contain an illicit discharge.

**Some Common Impairments in Jefferson County**

- Nutrients
- Siltation
- Pathogens
- Pesticides (Dieldrin)
- Turbidity
- Temperature
- pH
- Oil and grease

- Locations of previous illicit discharges- areas with historical illicit discharge reports or previous citizen complaints are considered high priority.
- Approximate density of known outfalls per stream mile - areas with a high density of outfalls are considered high priorities.
- Age of infrastructure/development – older areas of the community with known high septic tank failure rates or improper stormwater infrastructure is considered a priority.
- Location of public sanitary sewer/age of sewer/date of separation – Older areas that were put on sewer long ago or have or have areas that are susceptible to pipe erosion are considered a priority.
- Water Quality Information

Water Quality Classification for the State of Alabama applicable to Jefferson County is as follows:

- Outstanding Alabama Water (OAW)
- Public Water Supply (PWS)
- Swimming and Other Whole Body Water-Contact Sports (S)
- Fish and Wildlife (F&W)
- Limited Warmwater Fishery (LWF)
- Agricultural and Industrial Water Supply ( A&I)

For specific information on the classification of specific rivers go to:

[http://www.epa.gov/waterscience/standards/wqslibrary/al/al\\_4\\_11wqs.pdf](http://www.epa.gov/waterscience/standards/wqslibrary/al/al_4_11wqs.pdf)

ADEM 303(d) list – ADEM and EPA evaluate water quality of Alabama surface waterbodies and generate the 303(d) list of impaired water bodies. The list includes a description of the use that is impaired, the cause of the impairment, and the source. In some cases ADEM has identified illicit discharges or wet weather discharges as the cause. If one of the municipalities has a waterbody that is impaired due to wet weather or illicit discharges it becomes a priority to JCDH and Storm Water Management Authority, Inc, Inc. Impaired waters on the 303(d) list will be subjected to Total Maximum Daily Load (TMDL) standard for the pollutant of concern. This TMDL (when available) is factored into the overall IDDE program. This list is provided to the public at

<http://adem.alabama.gov/programs/water/wquality/2010AL303dList.pdf>

- Areas that drain to public beaches or drinking water sources – These areas are designated as high priority areas for public health and economic reasons.

It should be noted that the above list is not exhaustive. There may be additional data pertinent to locating priority areas that are constantly evolving. The use of any of these will be based on the personal knowledge and experience of JCDH as well as Storm Water Management Authority, Inc, Inc officials.

### *2.2.3 Evaluate Illicit Discharge Potential*

The understanding of the unique waterbodies spread throughout the municipalities of Jefferson County allows the officials of Storm Water Management Authority, Inc, Inc and JCDH to establish a priority ranking. This will assign values of High Priority, Medium Priority, or Low Priority to each watershed. Table 2-4 provides an example of one of the components employed where criterion is evaluated for each waterbody and assigned an illicit discharge potential (IDP) of 1 for low potential, 2 for medium potential, and 3 for high potential. The scores for each waterbody are then averaged to produce a resultant overall score for the waterbody that will range from 1 (low priority) to 3 (high priority). Figure 2-2 shows a GIS mapping detection system that is the major component along with scoring that allows for priority areas to be assigned to each watershed.

The IDDE prioritization process allows Storm Water Management Authority, Inc, Inc and JCDH to focus their efforts on:

- Areas that need further mapping
- Community-specific detection techniques
- Prioritization of storm drain system maintenance work



**TABLE 2-4:  
EXAMPLE PRIORITIZATION TABLE USING AVAILABLE INFORMATION**

	Land Use	NHDES Category on 303(d) List	Stormwater Outfall Density (# of Outfalls per Stream Mile)	Average Age of Development (years)	Raw IDP Score	Normalized IDP Score**
Area A	Commercial (2)*	Impaired – Other Source (2)*	14 (2)*	40 (2)*	8	2
Area B	Residential (1)	Not Impaired (1)	10 (2)	10 (1)	5	1.25
Area C	Industrial (3)	Impaired – Illicit Discharge or Stormwater (3)	16 (2)	75 (3)	11	2.75
Area D	Residential (1)	Not Impaired (1)	9 (1)	15 (1)	4	1
Area E	Residential (1)	No data available	21 (3)	20 (1)	5	1.67

Notes:

- The number in parentheses is the Illicit Discharge Potential (IDP) “score” (with 3 defined as a high IDP) earned for that area for the category identified. Basis for assigning scores (based on benchmarks) to assess IDP is defined as follows:

Category Definitions	Land Use	JCDH Category	Stormwater Outfall Density	Average Age of Development
High (3)	Industrial	Impaired-illicit discharge or stormwater	>20	>50
Medium (2)	Commercial	Impaired- other source	10-20	25-50
Low (1)	Residential	Not impaired	<10	<25

- Normalizing the raw IDP scores (by dividing the raw score by the number of screening factors assessed) will produce scores that fall into the Standard scale of 1 to 3 for low to high IDP, respectively.

*SOURCE: Modified from Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, 2004, p.53, Table 15.*

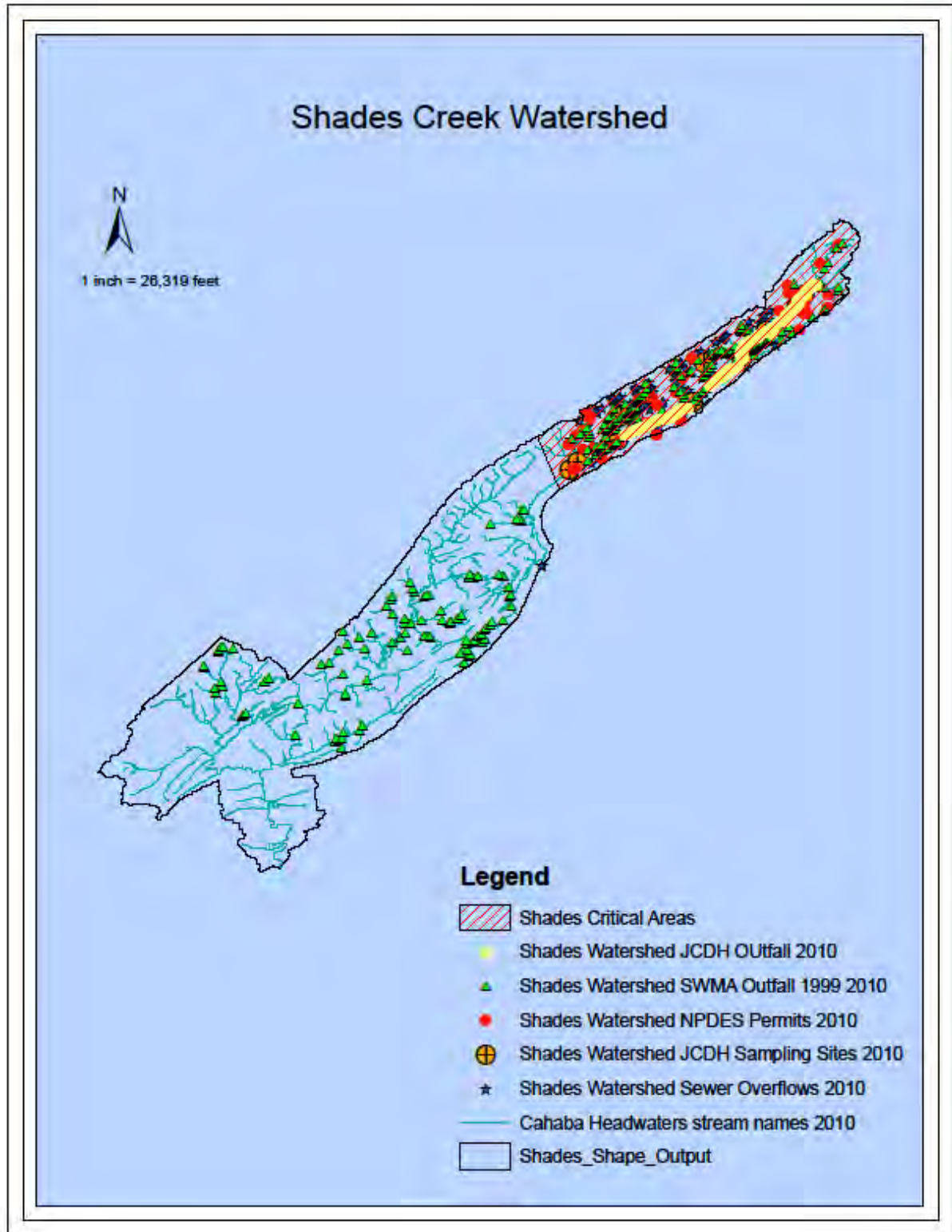


Figure 2-2 Shades Creek Watershed

### 2.3 MAPPING THE SYSTEM

This section will focus on the development of a comprehensive storm drain map using GIS technology. The strategy used to build the storm drain map by JCDH and Storm Water Management Authority, Inc, Inc is as follows:

1. Review/ Office Preparation:
  - a) Existing GIS maps were checked for data in high priority areas first, then medium priority areas, then low priority areas. The maps used came from various sources including Jefferson County, Storm Water Management Authority, Inc, and various state and local agencies. The maps obtained showed land usage, development area patterns, tax maps, as well as old Storm Water Management Authority, Inc priority areas.
  - b) A naming and numbering system was developed for outfalls as well as GIS coordinates and pictures of all outfalls were stored in a data dictionary. This will facilitate future inspections and aid in documentation of maintenance.
  - c) A system of marking outfalls is being employed to help mark outfalls in the field. Spray paint is being examined but a more permanent system would be ideal.
  - d) Equipment was obtained for mapping including all on the list and a few items that are excluded.
  - e) A preliminary schedule was developed to show the various steps need to reach completion. This schedule is subject to change based on factors such as weather, creek level, or other factors.
  - f) Canoes were put into service for areas that could not be walked. Areas that have thick undergrowth were identified as areas to be walked during the fall or winter months.
  - g) Sampling sites and results were taken into account in what areas needed to be first priority.



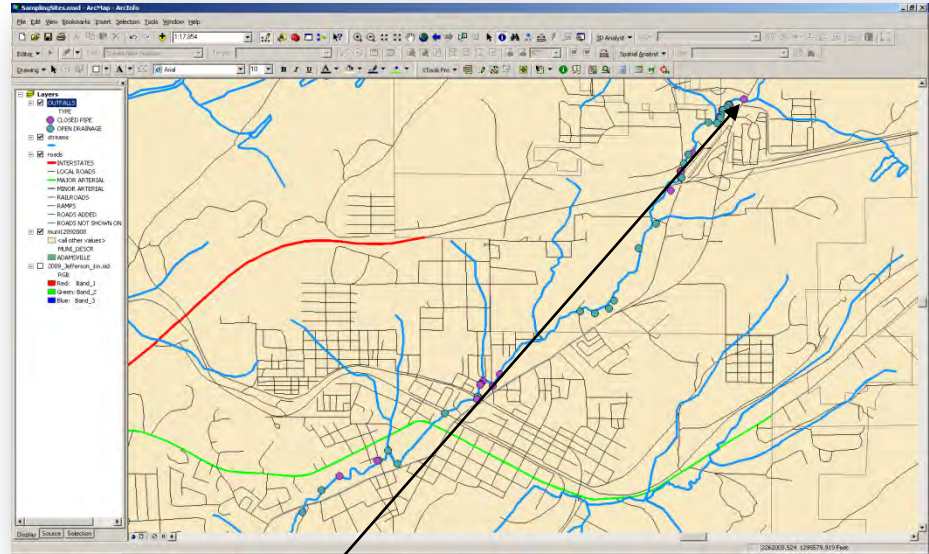
2. Field verification:
  - a) All major waterbodies within a given area of a municipality are being walked and outfall data collected on a weekly basis. The outfalls are identified using a global positioning system (GPS) unit capable of 3-5 m accuracy. Pathfinder® is being used to post-process the points to even greater accuracy than the GPS unit alone can provide. The outfalls are also being assigned a number in the GPS data dictionary as well as a picture taken by the Trimble Juno GPS Unit.
  - b) Spray paint is used in the field to identify outfalls.
  - c) Dry weather sampling is being conducted in regular intervals at sites designated by JCDH on the major feeder creeks. There are 29 of these sites along the feeder creeks in our municipalities. Dry weather screening on outfalls is also conducted on complaints and whenever an opportunity presents itself.
  - d) Dry weather screen is also being conducted on each tributary area twice a year to document any pollutant loadings.
  
3. Develop Initial GIS Maps: The storm drain systems are being mapped as a larger part of the GIS database for the Storm Water Management Authority, Inc's municipalities. The new data collected has the option to be displayed with any of the existing data sets. JCDH has the ability to display aerial photography, street maps, municipal boundaries, and various other layers as backdrops for relevant GIS maps. Aerial photographs are one of the most interesting background files to use to display information; however, their large file size (20 MB and larger) can make them impractical for all applications. An alternate way to display our mapped information consisted of downloading either United States Geological Survey (USGS) quadrangles, or a set of roads, political boundaries, waterbodies, and watershed information from various other local and governmental sources.

TIN maps are used by JCDH to formulate 3-dimensional pictures of watersheds and how data can affect the waterbodies therein. The 3-dimensional maps allow water to be traced from source to areas where it will likely be terminate into a major feeder creek.

4. Review and field check other structures (catch basins, culverts, pipes, ditches, drain manholes, etc.):
  - a. Aerial photography was first used to identify stormwater detention structures. Field Staff along with local firemen are now in the process of locating various catch basins that are undetectable using aerial photography, and taking photographs of pipe locations and sizes. The design details will then be used to get a detailed overview of all structures. A GPS unit with a data logger is being used to take photographs and pinpoint locations.
  - b. Quality Assurance/ Quality Control is performed in the office on a daily basis on all data recorded.
  - c. All data collected has a unique point type and number assigned.
5. Incorporate field data into GIS and revise as necessary: Once the GPS data files have been converted into GIS layers, and revised maps have been produced; these maps are proofed to assess their accuracy and completeness. The JCDH reviewer documents any additional data requirements, and corrects any errors in the information collected. A relational database helps JCDH and local municipalities establish the connections between pipes, outfalls, and other structures.

The mapping database should be completed in a four year period depending on resources and availability starting on August, 1, 2010. Below in Figure 2-3 is a sample GIS map generated by JCDH.

Figure 2-3: Storm and Outfall GIS map



All storm drains are marked on a GIS database with a picture assigned to each one.

## 2.4 DETECTION

### Dry Weather Discharge Definition

The CWP defines **dry weather** as a 48 hour period with no runoff producing rain fall. JCDH and Storm Water Management Authority, Inc define dry weather as a 48-72 hour period with less than 1/10-inch rainfall.

Illicit discharges can be detected in many ways. Determining which detection methods are appropriate for a municipality can be a relatively simple process. An example of this selection process is provided in Table 2-6. Sheets such as this as well as the following information are used to generate the areas and the frequency of inspections.

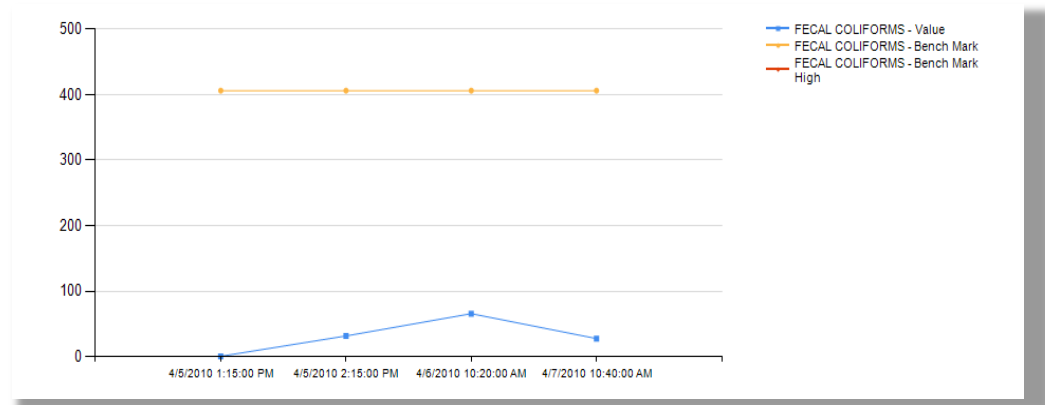
### 2.4.1 Dry Weather Inspections During Mapping (or initial inspections)

The Dry Weather Inspection Form (see Appendix A) can be used during the mapping to detect the continuous and intermittent discharges. The form is completed whenever evidence of an illicit discharge such as significant flow during dry weather, the presence of raw sewage indicators, staining, or residue, is observed. The discharge is then filed into a complaint form like the one seen below in Figure 2-5.

**2.4.2 Long-Term Dry Weather Inspections**

Long-term, regular inspections of outfalls are a primary part of JCDH’s IDDE program. Regular inspections are not significantly different from inspections conducted during mapping. The major difference is that a crew or inspector will have historical data to work with to make assessments. These inspections are kept in an electronic data base that is analyzed for any higher than expected sample values by using the bench marks in the Figure 2-4 below. The database is then used to direct inspectors on follow-up visits to investigate problem samples. The database also can provide a graph that gives a good baseline above which a sample should not reach. These sites are sampled at least four times a year and can be sampled on an as needed basis.

**Figure 2-4: JCDH Sampling Program**



Date Range: 7/6/2009 thru 7/6/2010

Site Name	Sample Date	Test Name	Result Value	Result Text	Unit	Weather	Sample Type	Lab Id	Lab Method
VES-CAR-076T	4/5/2010 1:15:00 PM	FECAL COLIFORMS	1	<1.00	COL/100ML	DRY	GRAB	20100 695-01	9222D
VES-CAR-078T	4/5/2010 2:15:00 PM	FECAL COLIFORMS	32	32.0	COL/100ML	DRY	GRAB	20100 696-01	9222D
VES-CAR-079T	4/6/2010 10:20:00 AM	FECAL COLIFORMS	66	66	COL/100ML	DRY	COMP	20100 704-01	9222D
VES-CAR-077T	4/7/2010 10:40:00 AM	FECAL COLIFORMS	28	28	COL/100ML	DRY	GRAB	20100 731-01	9222D

A schedule of long-term inspections for outfalls was then developed. The CWP recommends inspecting all outfalls once, at a minimum, during the first permit cycle in which JCDH is currently inspecting all outfalls and coming up with a grid system to allow for more efficient management of personnel. Further inspections are conducted to supplement the existing JCDH inspections as personnel and funds

allow. Long-term inspections are conducted during dry weather to maximize the potential to observe evidence of illicit discharges and form baseline trends. Winter and summer inspections are conducted at 29 sites to help monitor illicit discharges. The use of interns reduces cost, but to ensure quality of service each intern is trained in safety and identification techniques. If any problems are discovered a procedure is in place to allow for examination by more experienced personnel.

#### *2.5.1 Opportunistic Inspections*

Most public works crews conduct their regular duties in and around the storm drain system. A Supervisor may elect to have crews conduct outfall inspections on an informal basis while performing other work, or the supervisor may elect to have crews informally “keep a look out” for illicit discharges. If a city employee observes evidence of an illicit discharge during an informal or non-routine inspection, he/she should collect as much information about the potential illicit discharge as possible then contact his/her supervisor which will relay the information to the JCDH Stormwater hotline at (205)930-1999. A complaint form will then be generated by JCDH containing the information given and will be worked so as to alleviate the problem. A sample complaint form is shown on the next page in Figure 2-4.

Figure 2-4: Sample Complaint Form

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#### Examples of Illicit Discharge Indicators

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- Color
  - Floatables
  - Solids
  - Turbidity
  - Oil sheen
  - Grey mat
  - Odor
- 

While it may not be possible for all municipal employees to be able to personally call in an illicit discharges. There should be several other ways they can help alleviate this problem such as:

- The person observing the discharge can provide the information verbally to a dispatcher or the supervisor, who can then call in the complaint to the hotline.
- Personnel can log into JCDH's website to report any complaint concerns; however this option may be a bit more time consuming and immediate needs should be called in.
- A "local" JCDH stormwater program employee can be called to come investigate the complaint on an as needed basis.

It is important to collect as much information as possible at the time of the initial observation due to the likelihood that a discharge may be transitory or intermittent. Initial identification of the likely or potential sources of the discharge is also very important.

#### 2.5.2 Citizen Call-In Inspections

A citizen call-in program is an effective way to identify illicit discharges.

JCDH has a stormwater hotline that is accessible and publicized throughout the Storm Water Management Authority, Inc's municipalities. To maximize the effectiveness of citizen call-ins, the complaint system is filtered by an initial inspection so that each complaint is addressed and identified as valid. Upon validation the complaint is worked within 7-10 business days. The form is filled out with the citizen's information along with all relevant complaint information. There are a few ways through letters and faxes that anonymous complaints can be generated but most complaints must have an original complainant so as to be able to notify someone of the results. These are done by environmental health specialists as well as stormwater employees. The hotline is also accessible through JCDH's website at [WWW.JCDH.ORG](http://WWW.JCDH.ORG).

### *2.5.3 Septic System Inspections*

Septic System inspections are conducted through JCDH's Community Environmental Protection Division. The older rural and low density areas that are prone to septic tank failures are identified first and any problem is reported internally to that division to handle. Any failure is then handled in a timely manner and the tank is pumped out until the failure is repaired to prevent leaking into the storm sewer system.

## **2.5 TRACING ILLICIT DISCHARGES**

Once an illicit discharge has been reported or detected through an inspection, the next step is to locate the source. Selection of tracing techniques will depend on the type of illicit discharge detected, information collected during the initial discovery period, observation (whether through an inspection by a municipal employee, JCDH regular inspections, or through a citizen call-in), and the resources/technology available to the municipality. A single technique may be used or several techniques may be used in combination to identify the source of the discharge. Figure 2-5 presents a flow chart for selecting tracing techniques that can be applied to the two categories of potential illicit discharges: (1) transitory or intermittent discharges (where upon returning to the site, no flow is present at the location where the illicit discharge was initially reported), and (2) continuous discharges (where upon returning to the site a continuous flow is present and the flow may be more easily traced to its source). Each of these circumstances is described below:

1. Transitory or intermittent discharges: These conditions may occur as a result of an inspection or a citizen complaint. While initial information may have been collected regarding the potential illicit

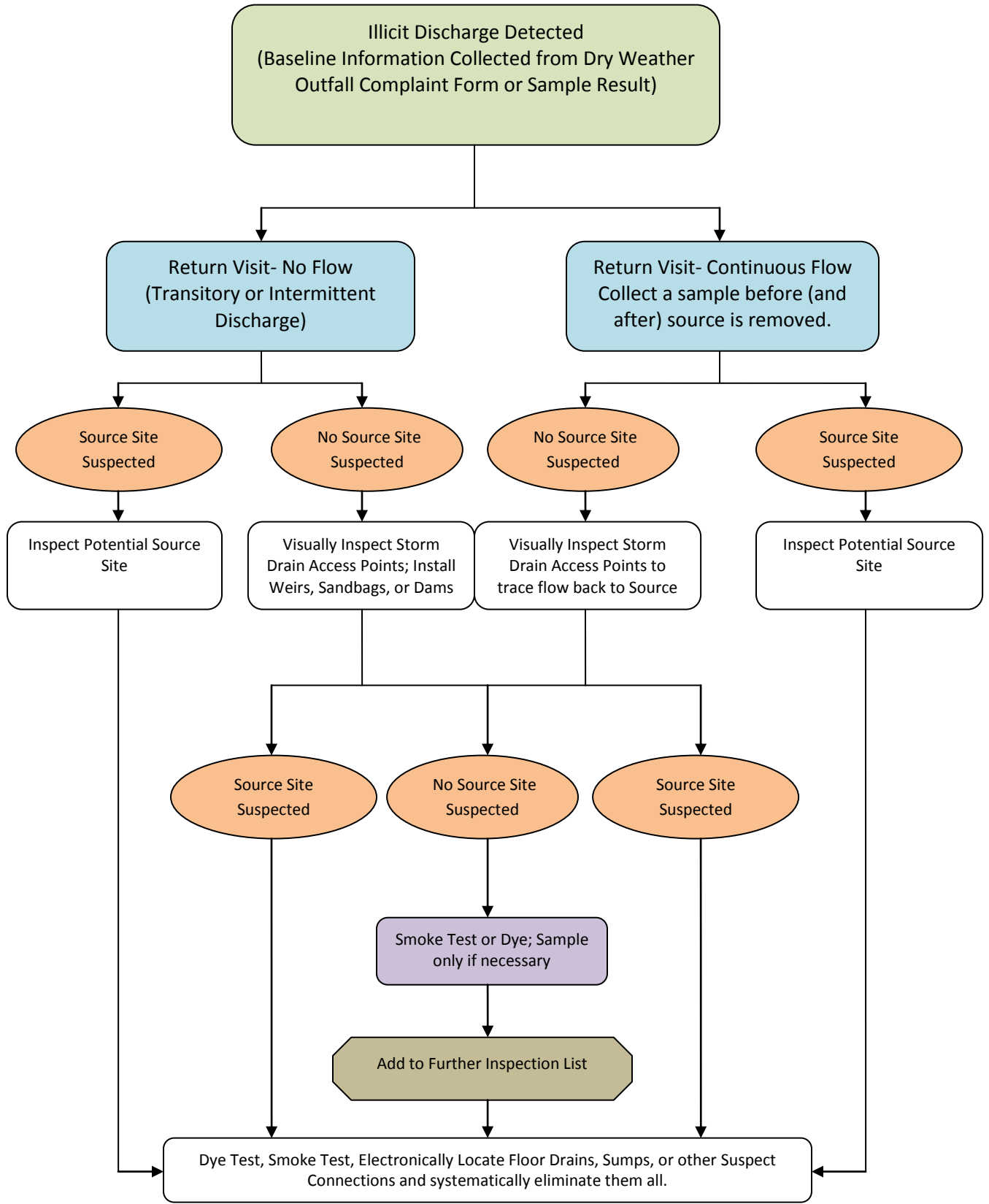
discharge, a return trip may show that the discharge was either intermittent or transitory (e.g., no flow is present upon return to the site). The investigative techniques used will depend on whether or not a potential source location was identified during the initial observation:

Potential source identified - If a potential source for the illicit discharge was initially identified, steps are taken to investigate the potential source site, such as inspecting the site and storm drain system in the vicinity of the site. If floor drains, sumps, or other suspect discharge locations are observed during this inspection, dye testing, smoke testing, or continuous flow monitoring may be used. These techniques should definitively show whether the suspect site was the source of the illicit discharge.

Potential source not identified - If no source site is suspected, and only the general area of the illicit discharge is known, it may be possible to trace the evidence of the illicit discharge by visual inspection of the storm drain access points. If this catch basin/manhole inspection technique proves to be unsuccessful, some interim steps are taken attempt to capture water from an intermittent discharge. For example, sand bagging, damming or block testing of selected storm drain access points, combined with installation can help reveal the source of the discharge. If these techniques have no positive result (no water pools behind the weir or sand bag), the discharge was likely transitory (one time only), and it may not be possible to determine its origin. In this case, the location of the originally reported illicit discharge is added to the complaint database and tracked for any future incidents. If the original report of the illicit discharge was severe or gross pollution, then smoke testing or televising of the storm drain system may be warranted.



**Figure 2-5**  
**Flow Chart for Selecting Tracing Techniques**



2. Continuous discharges: Tracing continuous discharges is typically easier than tracing transitory or intermittent discharges. The primary difference between tracing a transitory or intermittent discharge and tracing a continuous discharge is that sandbagging and weirs are not required for a continuous discharge. Visual observation of the system access points should reveal where the flow is coming from. Just as for tracing a transitory or intermittent discharge, if visual inspections fail in identification of the source and the original report was severe or gross pollution, then televising, smoke testing, or sample collection would be warranted. JCDH randomly collects a grab sample for bacterial analysis from any pipe with a significant flow, even if the discharge appears to be clear.

While these conditions may not cover the full extent of discharges that may be discovered, they should provide general guidance on the selection of tracing techniques. The following subsection describes in more detail each of the techniques that can be applied by JCDH, including their advantages and disadvantages.

#### *2.5.1 Tracing Techniques*

To select an effective tracing technique, one must have a good understanding of the technique and its limitations. The following is a brief summary of each of the tracing techniques that may be employed by JCDH to locate the source of an illicit discharge:

1. Visual Inspection at manholes/catch basins: This tracing technique is typically used when there is no suspected source site or in residential neighborhoods. It is the most cost effective and efficient method of tracing. Structures are inspected systematically starting at the initial detection location, gradually working upstream through the system. If the inspector is tracking a continuous discharge, the inspections may be relatively easy, and the flow can be traced back to its source. If the inspector is attempting to track a transitory or intermittent discharge, the inspector will make the following observations depending on the information provided from the initial identification: color and clarity of any discharge, staining or deposits on bottom of structure; oil sheen, scum, or foam on any standing fluids in sump of structure; odors, staining or deposits on inlet pipes

and outlet pipes. Depending on what the inspector is looking for, and what they find, they will progressively inspect additional structures until either a potential source is found, or no further evidence is found. If no further evidence is found the inspector may elect to further assess some of the structures by installing sandbags or other damming devices to determine if the discharge recurs. Inspectors are always equipped with proper safety equipment such as proper cone placement, safety vests in traffic areas, confined space entry techniques (if entry is necessary), steel-toed boots, etc.

2. Sampling flowing discharges: As shown in Figure 2-5, samples are collected only in the event a discharge is flowing through the outfall, unless a pollutant is clearly evident in stagnant pools of water or sump water. Table 2-8 lists the parameters that a sample can be analyzed for and provides a general discussion of how the results may be interpreted. This table was taken from the CWP manual (2004) which provides a more detailed discussion of sampling procedures and analysis of results. Sampling and analysis for many of the compounds should be completed by JCDH or other personnel trained in collection, handling, and preservation techniques to ensure accurate data. JCDH recommends collecting a sample when the discharge is initially found and after any source is removed. The sample collected after removing an illicit discharge can indicate if other illicit discharges are present. JCDH also holds the right to test any different chemical or pollutant at the inspector's discretion.

<b>TABLE 2-8: INDICATOR PARAMETERS USED TO DETECT ILLICIT DISCHARGES</b>					
Parameter	Discharge Types it can Detect				Laboratory/Analytical Challenges
	Sewage	Washwater	Tap Water	Industrial or Commercial Liquid Wastes	
Ammonia	●	☑	○	☑	Can change into other nitrogen forms as the flow travels to the outfall.
Boron	☑	☑	○	*	
Chlorine	○	○	○	☑	High chlorine demand in natural waters limits utility to flow with very
Color	☑	☑	○	☑	
Conductivity	☑	☑	○	☑	Ineffective in saline waters, generally highly variable.
Detergents - Surfactants	●	●	○	☑	Reagent is a hazardous waste.
E. coli Enterococci Total Coliform	☑	○	○	○	24-hour wait for results. Need to modify standard monitoring protocols to measure high bacteria concentrations.
Fluoride**	○	○	●	☑	Reagent is a hazardous waste. Exception for communities that do not fluoridate their tap water.
Hardness	☑	☑	☑	☑	
pH	○	☑	○	☑	
Potassium	☑	○	○	●	May need to use two separate analytical techniques, depending on the concentration.
Turbidity	☑	☑	○	☑	
<ul style="list-style-type: none"> <li>● Can almost always (&gt;80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.</li> <li>☑ Can sometimes (&gt;50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter.</li> <li>○ Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water.</li> <li>* Data are not available to assess the utility as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and washwater.</li> <li>** Fluoride is a poor indicator when used alone, but can distinguish between washwater and sewage when combined with analysis for detergents, ammonia and potassium.</li> </ul>					

SOURCE: Modified from *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, 2004, p. 122, Table 39

3. Sandbagging or damming: Sandbagging and damming is typically only conducted when the discharge flow has ceased since initial detection. Application of this technique is sparsely used and will show whether the discharge is one time only (no water pools behind the sandbag or dam) or intermittent (water pools behind the sandbag). CWP provides the following explanation:

This technique involves placement of sandbags or similar barriers such as caulk dams within strategic manholes in the storm drain network to form a temporary dam that collects any intermittent flows that may occur. Any flow collected behind the sandbag is then assessed using visual observations or by indicator sampling. Sandbags are lowered on a rope through the manhole to form a dam along the bottom of the storm drain, taking care not to fully block the pipe (in case it rains before the sandbag is retrieved). Sandbags are typically installed at junctions in the network to eliminate contributing branches from further consideration. If no flow collects behind the sandbag, the upstream pipe network can be ruled out as a source of the intermittent discharge. Sandbags are typically left in place for no more than 48 hours, and should only be installed when dry weather is forecast. Sandbags should not be left in place during a heavy rainstorm. They may cause a blockage in the storm drain, or, they may be washed downstream and lost. The biggest downside to sandbagging and damming is that it requires at least two trips to each manhole (CWP, 2004, p.157).

4. Optical brightener monitoring traps: (JCDH is very limited in employing this specific technique because the effectiveness is yet to be determined) Optical brightener monitoring (OBM) traps can be used to trace intermittent or transitory discharges that result from washwater with detergent. Detergents usually contain optical brighteners that can be detected at high concentrations using this method. However, the traps only detect highly concentrated discharges. The detergent concentration required to be detected by the light is approximately the same as pure washwater from a washing machine. Consequently, OBM traps may be best suited as a simple indicator of the presence or absence of intermittent flow or to detect the most concentrated flows. The traps can be made using easily acquired materials.

The traps contain an absorbent, unbleached cotton pad or fabric swatch contained inside a wire mesh trap or section of small diameter (e.g., 2-inch) PVC pipe. The traps should be anchored to the inside of an outfall at the invert using wire or monofilament that is secured to the pipe itself. Rocks or bricks can be used a temporary weight to hold the trap in place.

JCDH inspectors can retrieve the OBM traps after 24 to 72 hours of dry weather. OBM traps are retrieved before coming into contact with stormwater, which will contaminate the trap or wash it away. When placed under a long wave fluorescent ultraviolet or “black” light, an OBM trap will indicate if it has been exposed to detergents. CWP reports that OBM traps have been used with some success in Massachusetts (Sergeant et al. 1998) and northern Virginia (Waye 2000).

5. Dye testing: (Green Fluorescent used by JCDH) Dye testing is typically conducted when a potential source site has been identified, and the inspector is trying to determine whether the site has floor drains or other locations that connect and discharge to the storm drain system. Permission to access the site must be obtained before dye testing can be conducted. Verbal or written requests by JCDH are both acceptable. The inspector should review available sanitary sewer and storm drain maps before conducting the dye testing. The dye testing procedure consists of two steps: (1) discharging the dye into the suspect location, and (2) opening nearby storm drain and sanitary sewer manhole covers to determine where the dye discharges to. This procedure is fairly effective for confirming direct connections into the storm drain system for short reaches. If a longer pipe network is being evaluated, charcoal packets can be left in selected structures and later collected and analyzed for the presence of the dye. If dye testing porcelain structures, tablets or charcoal should be wrapped in tissue before depositing. When dye testing, the inspector takes into account that each structure (sink, toilet, etc.) should be tested separately. Many times a single utility in a basement may be incorrectly connected to a storm drain line instead of a sanitary line.
6. Televising: (Not in use by JCDH at this time but Jefferson County Environmental Services employs this technique) Televised video inspections are a useful technique when an illicit connection or infiltration from a nearby sanitary sewer is

suspected, but little evidence of the illicit discharge remains behind. Two types of video cameras are available for use: (1) a small camera that can be manually pushed on a stiff cable through storm drains to observe the interior of the piping, or (2) a larger remote operated video camera on treads or wheels that can be guided through storm drains to view the interior of the pipe. Typically the operator of the camera has access to a keyboard or audio voice-over to record significant findings on the videotape that is produced for future review and evaluation.

7. Smoke testing: Smoke testing is a useful technique for tracing intermittent discharges or continuous discharges that have no apparent source site. Smoke is introduced into the storm drain system, and emerges at locations that are connected to the system. Smoke testing works best for short reaches of pipe, or in situations where pipe diameters are too small for video testing.

The Center for Watershed Protection provides the following discussion on planning and executing smoke testing:

JCDH must provide notice to the public in the immediate vicinity about the date and purpose of the smoke testing. The smoke used is non-toxic, but can cause respiratory irritation, which can be a problem for some residents. Residents will be notified prior to testing, and should be provided the following information (Hurco Technologies, Inc. 2003):

- Date testing will occur
- Reason for smoke testing
- Precautions they can take to prevent smoke from entering their homes or businesses
- What they need to do if smoke enters their home or business, and any health concerns associated with the smoke
- A number residents can call to relay any particular health concerns (e.g., chronic respiratory problems)

JCDH will also notify local media to get the word out if extensive smoke testing is planned (e.g., television, newspaper, and radio). On the actual day of testing, local fire departments and 911 call centers will be notified to handle any calls from the public.

The basic equipment needed for smoke testing includes manhole safety equipment, a smoke source, smoke blower, and sewer plugs. Two smoke sources can be used for smoke testing. The first is a smoke “bomb,” or “candle” that burns at a controlled rate and releases very white smoke visible at relatively low concentrations. Smoke bombs are suspended beneath a blower in a manhole. Candles are available in 30 second to three minute sizes. Once opened, smoke bombs should be kept in a dry location and should be used within one year.

The second smoke source is liquid smoke, which is a petroleum-based product that is injected into the hot exhaust of a blower where it is heated and vaporized. The length of smoke production can vary depending on the length of the pipe being tested. In general, liquid smoke is not as consistently visible and does not travel as far as smoke from bombs.

Smoke blowers provide a high volume of air that forces smoke through the storm drain pipe. Two types of blowers are commonly used: “squirrel cage” blowers and direct-drive propeller blowers. Squirrel cage blowers are large and may weigh more than 100 pounds, but allow the operator to generate more controlled smoke output. Direct-drive propeller blowers are considerably lighter and more compact, which allows for easier transport and positioning.

Three basic steps are involved in smoke testing. First, the storm drain is sealed off by plugging storm drain inlets. Next, the smoke is released and forced by the blower through the storm drain system. Lastly, the inspector looks for any escape of smoke above-ground to find potential leaks. Septic vents on rooftops are clear indicators of cross connections to the storm drain system.

One of three methods can be used to seal off the storm drain. (1) Sandbags can be lowered into place with a rope from the street surface. (2) Alternatively, beach balls that have a diameter slightly larger than the drain can be inserted into the pipe. The beach ball is then placed in a mesh bag with a rope attached to it so it can be secured and retrieved. If the beach ball gets stuck in the pipe, it can simply be punctured, deflated



and removed. (3) Finally, expandable plugs are available, and may be inserted from the ground surface.

Blowers should be set up next to the open manhole after the smoke is started. Only one manhole is tested at a time. If a smoke candle is used, the inspector simply lights the candle, places it in a bucket, and lowers it into the manhole. The inspector then watches to see where smoke escapes from the pipe. The two most common situations that indicate an illicit discharge are when smoke is seen rising from internal plumbing fixtures (typically reported by residents) or from sewer vents. Sewer vents extend upward from the sewer lateral to release gas buildup, and are not supposed to be connected to the storm drain system (CWP, 2004, p. 165-166).

## **2.6 REMOVING ILLICIT CONNECTIONS AND DISCHARGES**

Regulated MS4 communities are required to adopt an ordinance or other regulatory mechanism to prohibit illicit discharges to their storm drain system. Storm Water Management Authority, Inc and JCDH operate off the *Erosion and Sedimentation Control Ordinance* that was instated on October 1, 1999. This ordinance allows for enforcement procedures that can be taken in the event of discovery of an illicit discharge. A new ordinance is set to be released within the 2011 calendar year and all illicit discharges should be referred to the most current ordinance. This section describes the procedures that should be taken for illicit discharge removal.

Table 2-9 summarizes the procedures that should be followed to ensure a timely and complete removal depending on the types of illicit discharges that may be discovered, and the various responsible parties. For most cases, the enforcement authority in the Ordinance will coordinate discharge removal.

**TABLE 2-9:  
NOTIFICATION AND REMOVAL PROCEDURES FOR ILLICIT DISCHARGES INTO THE MUNICIPAL SEPARATE  
STORM SEWER SYSTEM**

<b>Financially Responsible Party</b>	<b>Source Identified</b>	<b>Enforcement Authority</b>	<b>Procedure to Follow</b>
Private Property Owner	One-time illicit discharge (e.g., spill, dumping, etc.)	Ordinance enforcement authority (e.g., City official, JCDH official, or various other agencies)	<ul style="list-style-type: none"> <li>• Contact Owner</li> <li>• Issue Notice of Violation</li> <li>• Issue fine for larger spills</li> </ul>
Private Property Owner	Intermittent or continuous illicit discharge from legal connection	Ordinance enforcement authority (e.g., Code Enforcement Officer)	<ul style="list-style-type: none"> <li>• Contact Owner</li> <li>• Issue Notice of Violation</li> <li>• Determine schedule for removal</li> <li>• Confirm removal</li> </ul>
Private Property Owner	Intermittent or continuous illicit discharge from illegal connection or indirect (e.g., infiltration or failed septic)	Plumbing Inspector, JCDH Community Environmental Protection Division	<ul style="list-style-type: none"> <li>• Notify plumbing inspector/</li> <li>• Notify JCDH by complaint</li> <li>• Enforcement Action taken by JCDH</li> </ul>
Municipal	Intermittent or continuous illicit discharge from illegal connection or indirect (e.g., failed sewer line)	Ordinance enforcement authority (e.g., City official, JCDH official, or various other agencies)	<ul style="list-style-type: none"> <li>• Issue work order</li> <li>• Schedule removal</li> <li>• Remove connection</li> <li>• Confirm removal</li> </ul>
Exempt 3 <sup>rd</sup> Party (see Section 2.6.4)	Any	USEPA	<ul style="list-style-type: none"> <li>• Notify exempt third party and USEPA of illicit discharge</li> </ul>

The following subsections address the issues of financial responsibility for removal (Section 2.6.1), forms and procedures that can be used in association with issuing a Notice of Violation (NOV) (Section 2.6.2), circumstances in which a municipality can take emergency action by referring directly to JCDH for discharges that are a threat to human health or the environment (Section 2.6.3), and procedures to follow when an illicit discharge from an exempt party is identified (Section 2.6.4).

### 2.6.1 Financial Responsibility

Once an illicit discharge's source has been identified, the financial responsibility of removing it is determined in the *Erosion and Sedimentation Control Ordinance* adopted by all Storm Water Management Authority, Inc municipalities on October 1, 1999. The following describes three cases that might be encountered:

- 1) The illicit discharge was a private party dumping into the storm drain system (a transient discharge). In this case, the *Erosion and Sedimentation Control Ordinance Article 7, Section 7.05* would allow for first a Notice of Violation, a Compliance Order, and/ or a Cease and Desist Order to be issued and a fine to be imposed of no less than \$100.00 and no more than \$500.00 a day or up to 180 days in jail.
- 2) The illicit discharge originated from a connection to the storm drain system (transient, intermittent, or continuous) that was once allowed. Such as an outdated overflow or anything of the nature. The overflow must be fixed on an as needed basis and appropriate action taken. A Notice of Violation could be issued and a fine could be imposed by JCDH if necessary. All washing machines, septic tanks, gray water generators, etc. are taken off through the Community Environmental Health Division of JCDH.
- 3) The illicit discharge resulted from an illegal connection (i.e., a connection that violates state plumbing codes). For intermittent or continuous discharges that are the result of an illegal direct connection into the storm drain system, the cost for disconnection will fall to either the property owner of the illegal connection or the municipality, depending on the circumstances of the connection. For example, if the connection was incorrectly applied during a separation project conducted by the municipality, the cost to correct the connection should be borne by the municipality. If the connection was the result of a private contractor working for the resident, the resident would be financially responsible for correcting the connection. Similarly, if the illicit discharge is the result of a failed sanitary sewer line, the party responsible for the failed sanitary sewer line must pay for the correction.

### 2.6.2 Notice of Violation

For violations of the *Erosion and Sedimentation Control Ordinance*, the Storm Water Management Authority, Inc municipalities issue a Notice of Violation. A Notice of Violation form will be generated by the municipalities and will look similar to the form shown in Appendix A. It

should be noted that the NOV describes a schedule for the removal to be completed, as well as a summary of any agreements between the parties.

### *2.6.3 Emergency Disconnections*

The *Erosion and Sedimentation Control Ordinance* allows for a disconnection to the storm drain system for discharges that present “a threat to the environment or to the health or welfare of persons, or to the storm drain system”. Disconnections may include blocking pipes, constructing dams, or taking other measures on public ways or public property to physically block the discharge. The municipal enforcement authority for the ordinance may want to call the Jefferson County Department of Health at (205) 930-1230 or the Jefferson County Emergency Management Authority at (205) 254-2039 when making this determination for disconnection.

### *2.6.4 Discharges from Exempt Parties*

Several categories of facilities are regulated by the USEPA for stormwater discharges under other permits. Because these facilities are already responsible to USEPA authority for stormwater discharges, the municipality can exempt them from the *Erosion and Sedimentation Control Ordinance*. If a municipality encounters an illicit discharge that is suspected or determined to be coming from an exempt party that is regulated under USEPA stormwater regulation, the municipality should notify both the suspected discharger and the enforcement authority for that discharger. The notification can be verbal or in writing. Most municipalities have prior experience working with other enforcement authorities for suspected violations of either state or federal law.

The following is a brief list of parties that are regulated under an alternate stormwater program and are present in the *Erosion and Sedimentation Control Ordinance, Article 4 Exclusions*:

TABLE 2-10: EXAMPLE EXEMPT FACILITIES		
Exempt Facility	Alternate Regulation They Are Subject To	Enforcement Authority
<b>Alabama Department of Transportation (ALDOT)</b> (in selected urbanized areas)	NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Part V	USEPA
<b>Railroad facilities</b>	NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)	USEPA
<b>Industrial Facilities with selected SIC codes</b> (See Table 2-11 for a complete list)	Multi Sector General Permit for Industrial Activities	USEPA

As shown in Table 2-9, if a municipality identifies that an illicit discharge has come from one of these facilities, they should notify both the discharger and the enforcement authority verbally or in writing of the activity. Standard Industrial Classification (SIC) codes for NPDES Stormwater Multi-Sector General Permit (MSGP) Industrial Facilities are listed in Table 2-11.

<b>Sector Name</b>	<b>SIC Code Listing</b>
<b>Sector A: Timber Products</b>	2411, 2421, 2426, 2429, 2431–2439 (except 2434), 2448, 2449, 2451, 2452, 2491, 2493, 2499
<b>Sector B: Paper and Allied Products</b>	2611, 2621, 2631, 2652–2657, 2671–2679
<b>Sector C: Chemical and Allied Products</b>	2812–2819, 2821–2824, 2833–2836, 2841–2844, 2851, 2861–2869, 2873–2879, 2891–2899, 3952 (limited to list)
<b>Sector D: Asphalt Paving and Roofing Materials and Lubricants</b>	2951, 2952, 2992, 2999
<b>Sector E: Glass Clay, Cement, Concrete, and Gypsum Products</b>	3211, 3221, 3229, 3231, 3241, 3251–3259, 3261–3269, 3271–3275, 3281, 3291, 3292, 3296, 3297, 3299
<b>Sector F: Primary Metals</b>	3312–3317, 3321–3325, 3331–3339, 3341, 3351–3357, 3363–3369, 3398, 3399
<b>Sector G: Metal Mining (Ore Mining and Dressing)</b>	1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099
<b>Sector H: Coal Mines and Coal Mining Related Facilities</b>	1221–1241
<b>Sector I: Oil and Gas Extraction and Refining</b>	1311, 1321, 1381–1389, 2911
<b>Sector J: Mineral Mining and Dressing</b>	1411, 1422–1429, 1442, 1446, 1455, 1459, 1474–1479, 1481, 1499
<b>Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities</b>	HZ
<b>Sector L: Landfills and Land Application Sites</b>	LF
<b>Sector M: Automobile Salvage Yards</b>	5015
<b>Sector N: Scrap Recycling Facilities</b>	5093
<b>Sector O: Steam Electric Generating Facilities</b>	SE
<b>Sector P: Land Transportation and Warehousing</b>	4011, 4013, 4111–4173, 4212–4231, 4311, 5171
<b>Sector Q: Water Transportation</b>	4412–4499
<b>Sector R: Ship and Boat Building or Repairing Yards</b>	3731, 3732
<b>Sector S: Air Transportation</b>	4512–4581
<b>Sector T: Treatment Works</b>	TW
<b>Sector U: Food and Kindred Products</b>	2011–2015, 2021–2026, 2032, 2041–2048, 2051–2053, 2061–2068, 2074–2079, 2082–2087, 2091–2099, 2111–2141
<b>Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Products</b>	2211–2299, 2311–2399, 3131–3199 (except 3111)
<b>Sector W: Furniture and Fixtures</b>	2434, 2511–2599
<b>Sector X: Printing and Publishing</b>	2711–2796
<b>Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.</b>	3011, 3021, 3052, 3053, 3061, 3069, 3081–3089, 3931, 3942–3949, 3951–3955 (except 3952 facilities as specified in Sector C), 3961, 3965, 3991–3999
<b>Sector Z: Leather Tanning and Finishing</b>	3111
<b>Sector AA: Fabricated Metal Products</b>	3479, 3411–3499, 3911–3915
<b>Sector AB: Transportation Equipment, Industrial or Commercial Machinery</b>	3511–3599 (except 3571–3579), 3711–3799 (except 3731, 3732)
<b>Sector AC: Electronic, Electrical, Photographic, and Optical Goods</b>	3571–3579, 3612–3699, 3812–3873
<b>Sector AD: Non-Classified Facilities</b>	N/A

## 2.7 TRACKING ILLICIT DISCHARGES

JCDH has developed a long-term stormwater complaint tracking program that can help municipalities better understand the origins of illicit discharges and identify maintenance issues for the storm drain system structures. The complaint tracking program will also facilitate evaluation of the overall IDDE program and will expedite annual reporting. The tracking program is based to address illicit discharge and maintenance issues resulting from the following:

- Citizen's Complaints
- Opportunistic Inspections (such as if an illicit discharge is found while doing outfall monitoring in which JCDH has a self complaint system in place)
- Regular Long Term Inspections ( if a sample comes back with high readings any follow-up tests are logged in the complaint system)
- Removal Actions Taken



### 2.7.1 *Electronic Database*

A GPS data dictionary has been created that includes all the fields on the Dry Weather Outfall Inspection Form. The advantage to this type of tracking program is that the database can be easily linked into GIS. Linking to GIS has allowed mapping of illicit discharge locations, citizen complaint locations, and many other IDDE issues which have assisted greatly in the overall program. Figure 2-12 contains some of the simple attributes that are used in the database. JCDH uses a sequel server database as well for sample technique, results inventory, and an excel spreadsheet for location data.

**FIGURE 2-12: STORMWATER PHASE II TRACKING COMPLAINT FORM**

Bessie  
Birmingham

**Action Buttons**

**Report Detail Information**

Nbr	Date	Site Name	Address	Claimant Name	Assigned To	Status	Type
<a href="#">22000</a>	12/16/2009	City of Pleasant Grove	PLEASANT GROVE, AL 35127	Doug Hyché	Tew, Ronnie	Closed/Resolved	Soil Erosion
<a href="#">22543</a>	2/5/2010	unknown	2045 montevallo Road LEEDS, AL 35094	Steve Callaway	Tew, Ronnie	Closed/Resolved	Soil Erosion
<a href="#">22592</a>	2/10/2010	Dennis Mason	2311 21st Avenue South BIRMINGHAM, AL 35223	Jim Nolan	Tew, Ronnie	Closed/Resolved	Drainage
<a href="#">22614</a>	2/11/2010	Unknown Unknown	7th Avenue MIDFIELD, AL 35228	Mark Hancock	Tew, Ronnie	Closed/Resolved	Drainage
<a href="#">22670</a>	2/17/2010	Unknown Unknown	, AL 0	Anonymous	Tew, Ronnie	Closed/Resolved	Soil Erosion
<a href="#">22689</a>	2/18/2010	Unknown Unknown	LEEDS, AL 35094	Barbara Reed	Tew, Ronnie	Closed/Resolved	Drainage
<a href="#">22936</a>	3/9/2010	Unknown Unknown	Shady Grove Road , AL 0	Scott Hofer	Tew, Ronnie	Closed/Resolved	Water Quality
<a href="#">23178</a>	3/25/2010		Brookside-Cardiff Road BROOKSIDE, AL 35036	Robert Manual	Tew, Ronnie	Under Investigation	Drainage
<a href="#">23315</a>	4/6/2010		15th Street HUEYTOWN, AL 35023	Kent Bram	Tew, Ronnie	Under Investigation	Water Quality
<a href="#">23327</a>	4/6/2010	Sharon Ford	2524 Carlos Avenue BIRMINGHAM, AL 35211	Sharon Ford	Tew, Ronnie	Closed/Resolved	Water Quality
<a href="#">23624</a>	4/22/2010	Unknown Unknown	Joy Street & Ruffner Road IRONDALE, AL 0	Hugh Morgan, PE	Tew, Ronnie	Closed/Resolved	Drainage
<a href="#">24001</a>	5/17/2010	Buddy Darby	6520 Hemlock Street TRUSSVILLE, AL 35173	Buddy Darby	Tew, Ronnie	Closed/Resolved	Soil Erosion
<a href="#">24611</a>	6/25/2010	Buddy Darby	6520 Hemlock Street TRUSSVILLE, AL 0	Buddy Darby	Tew, Ronnie	Under Investigation	Drainage

City: Pleasant Grove Zip: 35127

Home Phone: (205)999-9999 Work Phone:  Ext.

**Additional Comments**  
 Comment up to 500 Characters Max.

Road construction at 4th Street Pleasant Grove. Road is being put into new Pleasant Grove School off of 4th Street. No BMP. Complaint submitted by Ronnie Tew.

[Check Spelling](#)

**Other Information**

Assign To: Ronnie Tew Status: Closed/Resolved

N.O.V. Issued: No



## 2.8 EVALUATING THE PROGRAM

JCDH evaluates their IDDE program at the end of each year to assess its' effectiveness, efficiency, and to identify where improvements are needed. Table 2-13 is a worksheet that is used at the end of the fiscal cycle to evaluate the following components:

- 1) Priority Areas: Are the priority areas initially identified still appropriate? Considerations include reviewing the priority worksheet to assess if any changes have occurred since the initial evaluation was completed (such as: Have additional illicit discharges been discovered in any of the areas or is there significant development? Has a new 303(d) list come out naming new waterbodies as impaired?). JCDH also takes into account any negative sample trends in if priority area scopes need to be limited or expanded.
- 2) Detection Program: Is the detection program effective? Documenting the number of illicit discharges detected by the various detection mechanisms (inspections, citizen call-ins, opportunistic inspections) helps to decide where to allocate resources. This is becoming more extensive as the database at JCDH grows.
- 3) Tracing Techniques: What tracing techniques were generally used (site inspections, damming, etc)? What tracing techniques were generally effective? In how many instances were visual inspections of the area sufficient to identify the source of the illicit discharge (% effective)? Were there any times the equipment necessary to effectively trace an illicit discharge was not used because it was not available, was too costly to obtain, or not deemed a priority? Documenting the effectiveness of tracing techniques helps to evaluate how efficient the inspector is at the technique and if training is needed on where best to employ the technique.

Although completing an evaluation of the overall IDDE program may be time consuming and labor intensive, its benefits helps to reduce the costs for future inspection and IDDE efforts, which allows us to employ more efforts in other areas of the program. Keeping track of where illicit discharges are likely to occur and what techniques are useful can help lead to an effective identification program between JCDH and Storm Water Management Authority, Inc's municipalities

**TABLE 2-13:  
IDDE PROGRAM EVALUATION WORKSHEET**

Priority Areas <sup>(1)</sup>	List any factors that have changed since initial priority was set <sup>(2)</sup>				Recommended Change (Circle) <sup>(3)</sup>			
					Leave Priority Same		Re-evaluate	
<b>A</b>					Leave Priority Same		Re-evaluate	
<b>B</b>					Leave Priority Same		Re-evaluate	
<b>C</b>					Leave Priority Same		Re-evaluate	
Detection Program <sup>(1)</sup>	# Mapping Inspections <sup>(4)</sup>		# Longer Term Inspections <sup>(4)</sup>		# Citizen Complaints <sup>(4)</sup>		# Opportunistic Inspections <sup>(4)</sup>	
Priority Areas	Identified	Resolved	Identified	Resolved	Identified	Resolved	Identified	Resolved
<b>A</b>								
<b>B</b>								
<b>C</b>								
Tracing Techniques Used <sup>(5)</sup>	Effective	Ineffective (Comment below)	Effective	Ineffective (Comment below)	Effective	Ineffective (Comment below)	Effective	Ineffective (Comment below)
<b>Method:</b>								
<b>Method:</b>								
<b>Method:</b>								

**Comments/Recommended Changes <sup>(6)</sup>**

**Instructions:** This worksheet is for Program Managers to evaluate their IDDE Program.

1. Fill in the names of the priority areas in your municipality.
2. List any factors that have changed since the initial prioritization (i.e. have additional illicit discharges been discovered in these areas, has a new 303(d) list come out naming new waterbodies as impaired, etc.).
3. Circle the applicable recommended change.
4. Fill in the number of illicit discharges identified and subsequently resolved for each detection mechanism used.
5. Fill in the different tracing techniques that were used (visual, sampling, sandbagging, OBM, dye/smoke testing, televising), and check whether they were effective or ineffective for each applicable detection mechanism that they were used for. If the method was ineffective, comment on why it was ineffective and how it could be improved.
6. Note any additional comments or recommended changes.

# Chapter 3

## III. POLLUTION PREVENTION AND GOOD HOUSEKEEPING

Many municipal activities can result in stormwater pollution if not conducted properly. Activities such as vehicle maintenance, fueling, and landscaping involve handling, storage, and use of chemicals and petroleum products that must be used properly to prevent stormwater from becoming polluted. In addition, construction activities conducted during general maintenance of infrastructure can result in sedimentation and erosion of soil that can be swept by stormwater into the storm drain system or directly into waterbodies.

- a) *Develop and implement a program with a goal of preventing and/or reducing pollutant runoff from municipal operations. The program must include an employee training component.*
- b) *Include, at a minimum, maintenance activities for the following: parks and open space (areas such as public golf courses and athletic fields); fleet maintenance, building maintenance; new construction and land disturbance; roadway drainage system maintenance, post-construction plans; and stormwater system maintenance.*
- c) *Develop schedules for municipal maintenance activities described in paragraph (b) above.*
- d) *Develop inspection procedures and schedules for long term structural controls.*

**TABLE 3-1:  
GOOD HOUSEKEEPING/POLLUTION PREVENTION SOPs/ACTIVITY MATRIX**

SOP	Vehicle/ Equipment Maintenance	Facilities Maintenance (including Parks and Open Space)	Storm Drain System Maintenance	Construction Activities and Other Land Disturbances
B.1 Catch Basin Cleaning				
B.2 Storm Drain System Repair and Maintenance				
B.3 Erosion and Sediment Control				
B.4 Landscape Design and Management				
B.5 Storage and Disposal of Fertilizer and Pesticide				
B.6 Fertilizing and Turf Health Application				
B.7 Weed and Pest Control Application				
B.8 Mowing and Irrigation				
B.9 Vehicle and Equipment Storage				
B.10 Vehicle and Equipment Washing				
B.11 Vehicle and Equipment Fueling				
B.12 Spill Clean-up				
B.13 Parts Cleaning				
B.14 Spare Parts Storage				
B.15 Alternative Products Use/Storage/Disposal				
B.16 Petroleum and Chemical Disposal				
B.17 Petroleum and Chemical Handling				
B.18 Petroleum and Chemical Storage – Bulk				
B.19 Petroleum and Chemical Storage – Small Quantity				
B.20 Garbage Storage				
B.21 General Facility Housekeeping				
B.22 Floor Drains				
B.23 Painting				
B.24 Street Sweeping				
B.25 Snow Disposal				
B.26 Deicing Material Storage				
B.27 Deicing Material Application				

To address these components, this Chapter is divided into four subsections that describe four major categories of operations completed by each municipality:

- Vehicle/Equipment Maintenance (Section 3.1)
- Facilities Maintenance including parks and open space (Section 3.2)
- Storm Drain System Maintenance (Section 3.3), and
- Construction Activities (Section 3.4)

Each of these four operational areas contains a diverse set of activities, for which SOPs are appropriate. SOPs associated with each of these operational areas are contained in Appendix B. The SOPs outline the management and maintenance procedures that are used to minimize impacts on stormwater. Some of the SOPs apply to more than one operational area. For example, both vehicle maintenance and facilities maintenance require handling, storage, and disposal of petroleum products. Therefore, the SOPs for petroleum handling, storage and disposal in Appendix B address both of these operational areas. Table 3-1 shows the relationship between the SOPs that are contained in Appendix B and the operational areas that are described in this Chapter.

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**What is a “regulated contaminant”?**

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JCDH defines any regulated contaminant as “any physical, chemical, biological, radiological substance or other matter other than naturally occurring substances at naturally occurring levels, in water which adversely affects human health or the environment.” The Material Safety Data Sheets (MSDS) should be consulted for the products you use; See disposal information in the “Spills or Leaks” Section of the MSDS.

### **3.1 VEHICLE AND EQUIPMENT MAINTENANCE**

The SOPs related to vehicle maintenance have three basic structural components:

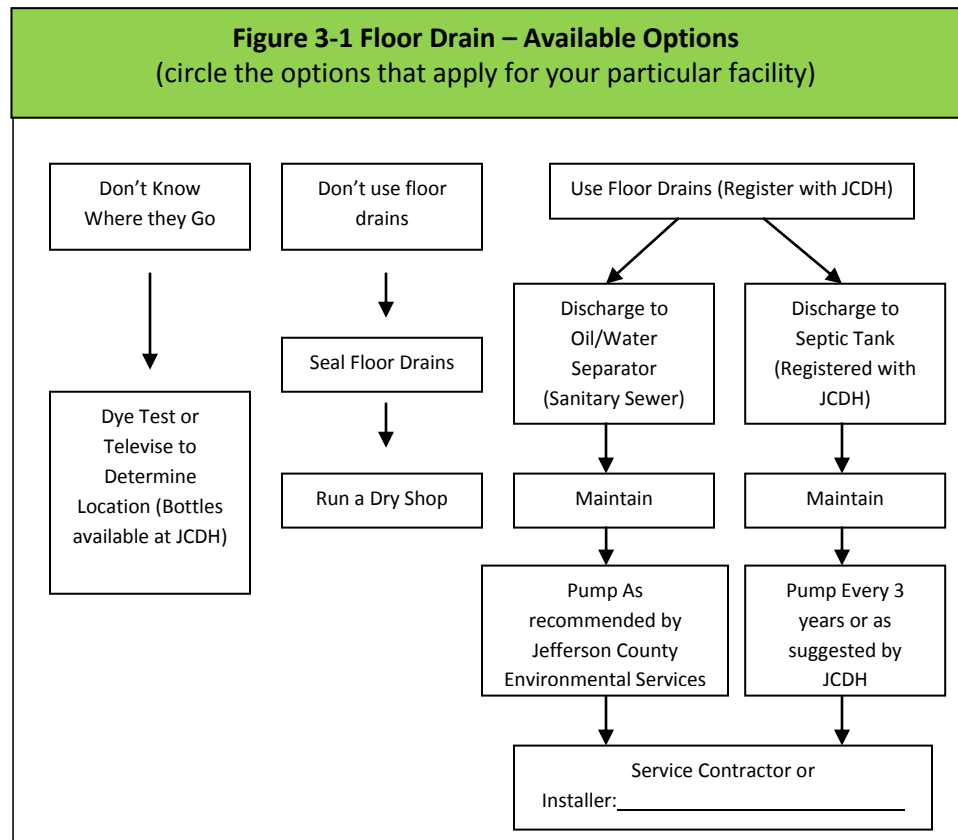
- 1) Store chemicals, wastes, and vehicles inside whenever possible to minimize their potential to pollute stormwater.
- 2) Handle with care to avoid spills. Preventing spills is the best way to minimize stormwater contact with chemicals and petroleum products.
- 3) Recycle whenever possible. When it is not possible to recycle, Use proper disposal procedures to ensure contact with stormwater is minimized.

Seven common vehicle maintenance activities are described below. To assist each Storm Water Management Authority, Inc municipality in understanding what are the best methods to protect stormwater from becoming polluted by these activities, a worksheet-style aid is being given by JCDH to each facility that provides for stormwater pollution prevention methods for each activity immediately following the description of that activity. It is recommended that each municipal

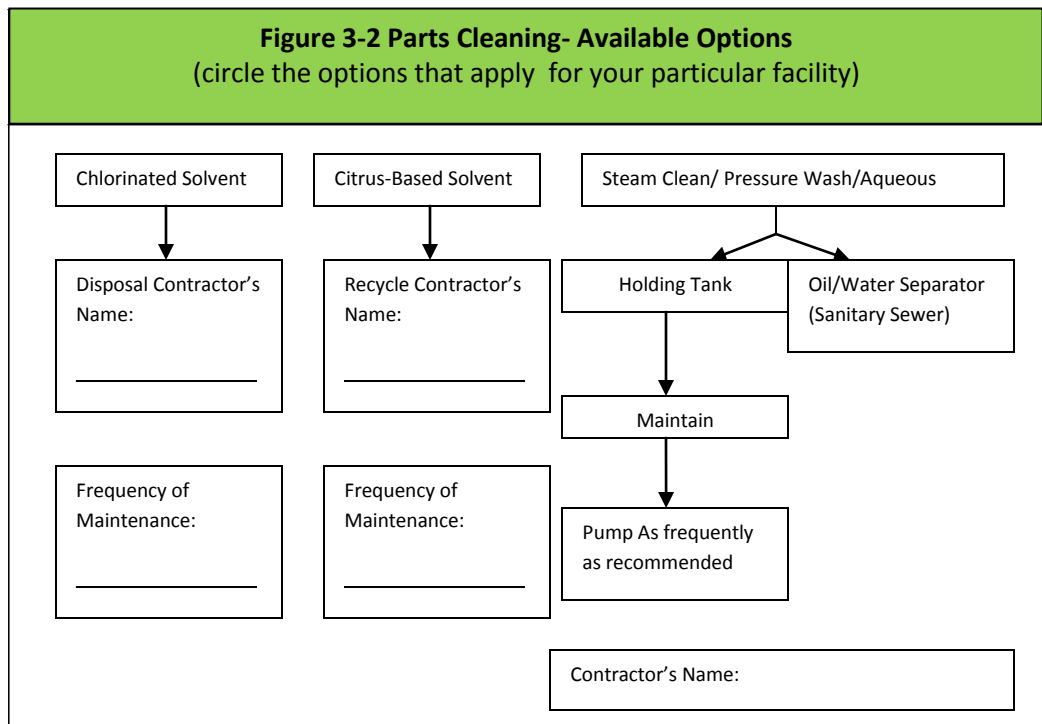
JCDH rules prohibit any discharge to the ground of non-domestic wastewater containing any regulated chemicals.

employee become familiar with the worksheets applicable for your facility and practice filling them out as you review this section.

1. **Floor Drains:** Facility managers should be able to positively identify the discharge location of their floor drains. If the discharge location is unknown, it should be determined by visual inspections. Available methods to determine the discharge location include: televising or dye testing in which a bottle can be obtained from JCDH (see Section 2.5 for discussion of advantages and disadvantages of each method). Floor drains should either be connected to a regularly maintained septic tank or to a regularly maintained oil/water separator that discharges to the sanitary sewer. The facility should connect the floor drains to the appropriate device or close and seal the floor drains, and run a “dry shop”. Public works facilities typically store or use “regulated contaminants” in the area served by the floor drain. Therefore, these floor drains must be closed, rerouted to the sanitary sewer via an oil/water separator, or rerouted to a septic tank registered with the JCDH (205)930-1230.



2. Parts Cleaning: Most vehicle maintenance facilities use one of three methods to clean parts: chlorinated solvents, citrus-based cleaners, or aqueous base cleaners. If chlorinated solvents are used, they should be disposed of as hazardous waste by a licensed hazardous waste contractor. Citrus based cleaners can be recycled by an off-site contractor reducing overall cost of its use. Steam cleaning or use of a commercial aqueous washer allows discharge to the sanitary sewer. Using non-hazardous chemicals reduces the risk of stormwater pollution.



3. Petroleum Storage: ADEM regulates above-ground storage tanks (ASTs) when a facility is storing more than 660 gallons of used oil or fuel, or when a facility is storing more than 10,000 gallons of heating oil used for on-site heating. ADEM requires registration of ASTs and requires interstitial monitoring and double walls on all tanks. Federal regulations (40 CFR Part 112) require development of a Spill Prevention Control and Countermeasure Plan (SPCC) for facilities that store more than 1,320 gallons of any petroleum product. These regulations help protect stormwater by requiring regular inspections and development of spill prevention and clean-up procedures. Facility managers should understand and follow the regulations that apply to their facility.

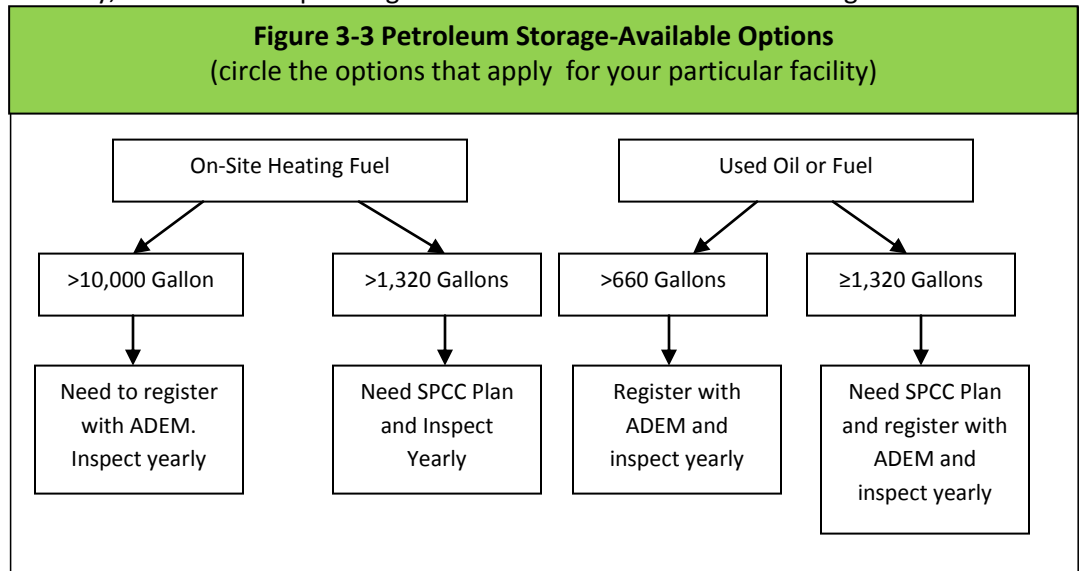
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**To Register an AST**

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Call ADEM AST  
Program at (334)394-  
4399

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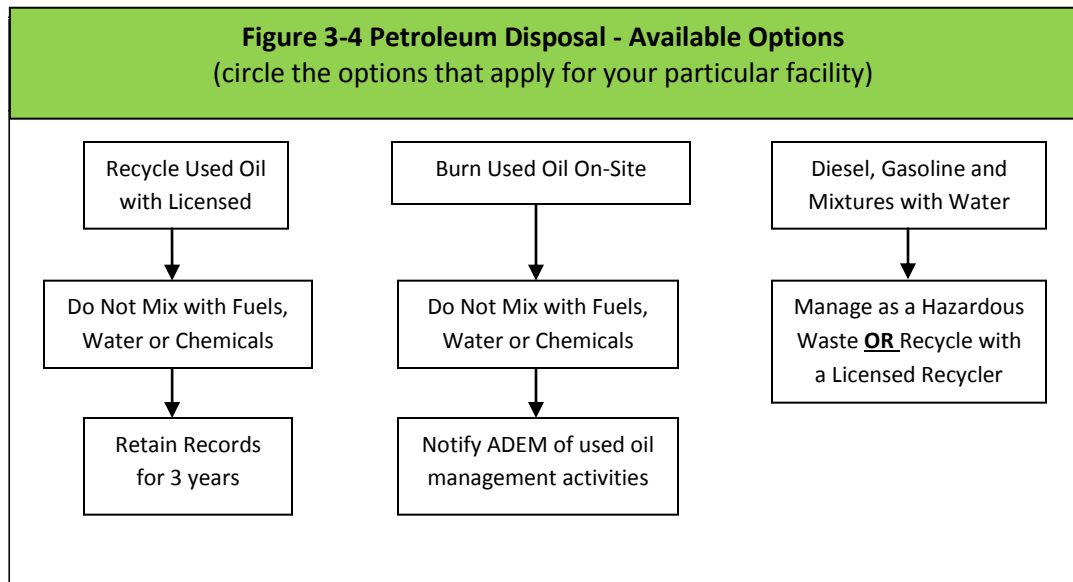


4. **Petroleum Disposal:** Proper disposal of petroleum products can minimize their impact on stormwater. Used oil can be recycled with a marketer who has registered with the ADEM. Used oil can also be burned on-site by a municipality for energy recovery as long as the oil has not been mixed with any other fuels or chemicals. Municipalities must notify ADEM of their used oil management activities if they are burning used oil on-site. Other wastes generated should be managed as follows:

- Diesel fuel and gasoline, or any mixture of oil and water, must be managed as hazardous waste and should not be mixed with used oil.
- Sludge from floor drains should be analyzed for Toxicity Characteristics Leaching Procedure (TCLP) prior to disposal to determine if it is hazardous waste.
- Residual solids from oil spills may be managed as solid waste, unless the residuals are from a volatile fuel such as gasoline. Volatile fuel residuals must be managed as a hazardous waste.

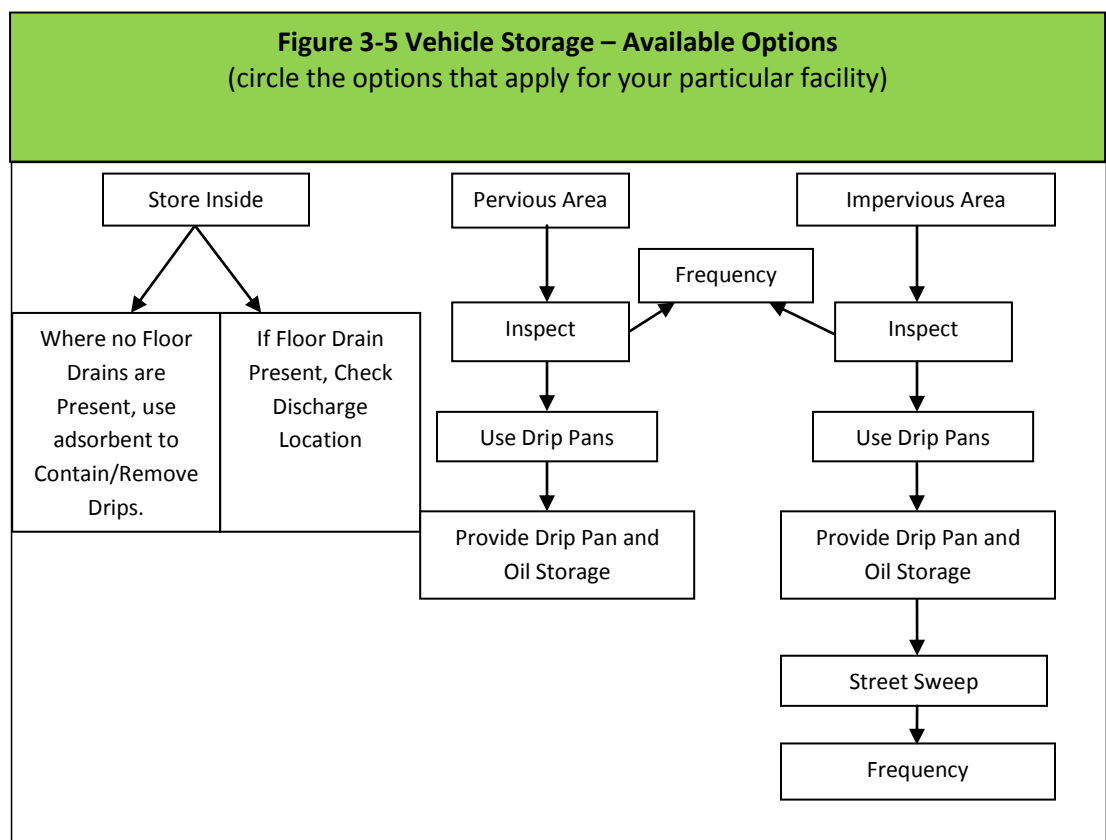
**Municipalities burning used oil onsite must register with ADEM**

(334)271-7730





5. **Vehicle Storage:** Vehicles should be stored indoors in an area where there are no floor drains or where any floor drains have been properly connected and registered(see above). If vehicles cannot be stored indoors, they can be stored on impervious areas that are inspected on a regular basis and which can be cleaned with a street sweeper as necessary. Vehicles can be stored on pervious (unpaved) areas that are inspected on a regular basis to assess if drip pans are necessary. Drip pans should always be used to collect leaking fluids. A dedicated, convenient storage area should be provided and clearly labeled for the drip pans and for the fluids they will contain. Leaking vehicles should be repaired as soon as practical to minimize stormwater pollution.



**To Register a Car Wash Facility:**

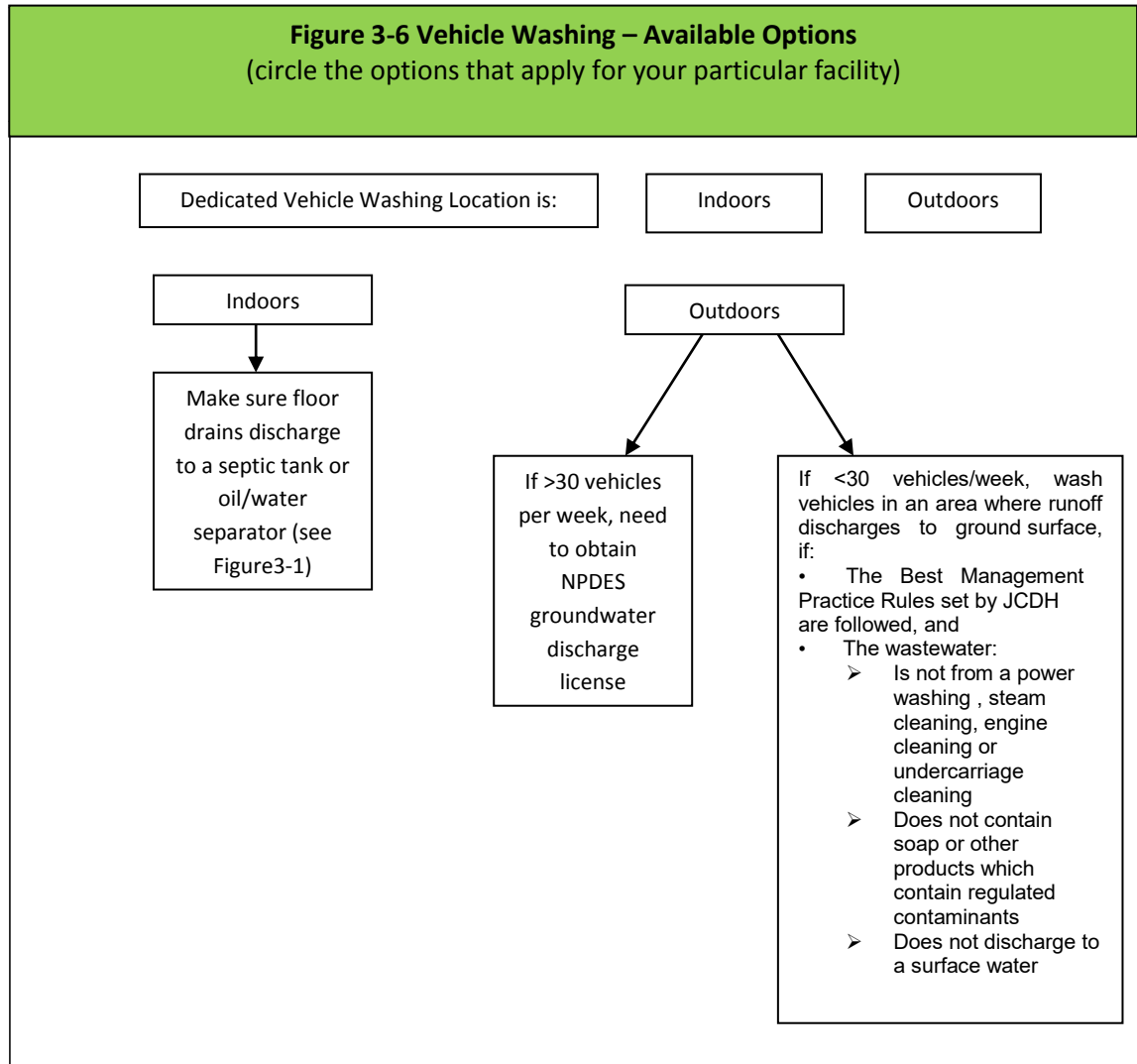
Call ADEM at (334) 271-4367 or for any other questions call JCDH at (205)930-1230

6. **Vehicle Washing:** If vehicles are washed regularly onsite, they should be washed in a dedicated area. The area can be:
  - 1) Indoors, if the washwater is discharged to floor drains that are properly connected to the septic tank or the sanitary sewer (See Figure 3-1),
  - 2) Outdoors; however if you wash more than 30 vehicles per week you must obtain a NPDES Groundwater Permit from ADEM, or
  - 3) Outdoors if you wash fewer than 30 vehicles per week and discharge to the ground surface, if:

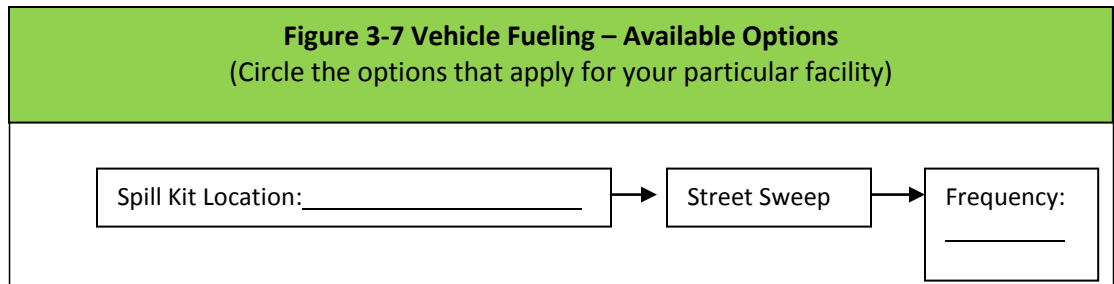
**To register a vehicle washing activity (when less than 30 vehicles per week):**

Contact JCDH  
Stormwater Division at  
(205)930-1230

- The Best Management Practice Rules are followed,
- The activity is registered with JCDH or ADEM, and
- The wastewater is not from power washing, steam cleaning, engine cleaning, or undercarriage cleaning or does not contain soaps or other products which contain regulated contaminants.
- Does not discharge to a surface water or storm inlet



7. Vehicle Fueling: Vehicle fueling areas are a significant generation point for petroleum contamination of stormwater. Vehicle fueling areas should be impervious surfaces, and should be inspected and swept with a street sweeper on a regular basis. A spill kit and covered garbage container should be located near the fueling area and should be well labeled for individuals to use when needed.



An important component of stormwater protection at vehicle and equipment maintenance facilities is general good housekeeping. Conducting regular inspections of a facility can be an effective pollution prevention technique. The following is a list of areas facility Managers should consider when developing their own inspection checklist:

- 1) Check refuse areas for trash on the ground that could contaminate stormwater.
- 2) Check exterior vehicle and equipment areas for leaks, spills, drips, or excess dirt. Consider if street sweeping is necessary and if drip pan use is acceptable.
- 3) Check fueling areas for leaks, spills, or drips.
- 4) Check exterior petroleum storage areas for leaks, spills, or drips.
- 5) Check or clean-up of tracked sand and/or salt.
- 6) Check calcium chloride tank for leaks, spills, or cracks.
- 7) Check vehicle washing area for excess sediment and wastes..
- 8) Check oil/water separator in floor drain system to ensure it is functioning, and clean if necessary.
- 9) Clean catch basin grates around facility for entering stormwater.

Table 3-2 is an example inspection checklist that should be used on a regular (monthly or quarterly) basis to identify areas of potential stormwater pollution. Table 3-3 contains a blank form that the Facility Manager should fill in for their facility and return to the governing municipal official as soon as practical. These forms will be used to track the stormwater duties performed by each facility for the Storm Water Management Authority, Inc’s annual report.



**TABLE 3-2:  
EXAMPLE INSPECTION CHECKLIST**

**Municipality:** \_\_\_\_\_ **Facility Manager:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Inspector:** \_\_\_\_\_

Inspection Area	Practice Followed	Comments	Date Resolved (if applicable)
Check refuse areas for trash on the ground that could contaminate stormwater or be washed away in stormwater	Acceptable/Needs Attention		
Check all exterior vehicle and equipment areas for leaks, spills, drips, or excess dirt – Street sweeping necessary?	Acceptable/Needs Attention		
Check all exterior vehicle and equipment areas for leaks, spills, drips, or excess dirt – Drip pan use acceptable?	Acceptable/Needs Attention		
Check fueling areas for leaks, spills or drips	Acceptable/Needs Attention		
Check exterior petroleum storage areas for leaks, spills, or drips	Acceptable/Needs Attention		
Clean-up of tracked sand that might allow stormwater transport of sand	Acceptable/Needs Attention		
Clean-up tracked salt that might result in stormwater transport	Acceptable/Needs Attention		
Check calcium chloride tank for leaks, spills or cracks	Acceptable/Needs Attention		
Check vehicle washing area for excess sediment or wastes	Acceptable/Needs Attention		
Other:	Acceptable/Needs Attention		
Other:	Acceptable/Needs Attention		

**Instructions:** This form needs to be used for regular (quarterly) inspections at vehicle/equipment maintenance facilities. Program Managers should fill in the areas to be inspected for their facilities (refer to Section 3.1 and Table 3.2 Example Inspection Checklist). When the checklist is used during an inspection, the inspector needs to fill in the date as well as his/her name, circle either “Acceptable” or “Needs Attention”, and note comments for each inspection area.

### **3.1 FACILITIES MAINTENANCE**

Most Storm Water Management Authority, Inc municipalities own and maintain their own buildings, parks, and other green spaces while others rely on Jefferson County to provide this service. Those that have their own maintenance staff perform general maintenance activities that include mowing and trimming, painting, pest control, weed control, and all of the chemical and petroleum handling that is associated with these activities. The SOPs contained in Appendix B provide best management practices to protect stormwater from the potential hazards associated with each of these maintenance activities. Facilities maintenance personnel should be trained in each of the SOPs associated with their job by their respective cities or JCDH.

In addition to training municipal employees on the SOPs in Appendix B that affect their jobs, a formal street sweeping program can reduce pollutant loads from road salt and can reduce sand export to receiving waters. Street sweeping also reduces the amount of sediment, debris, and organic matter being washed away by stormwater. A street sweeping schedule will need to be kept similar to the one shown in Appendix B and presented to Storm Water Management Authority, Inc.

USEPA does not recommend how frequently a community should sweep, but most sweeping of municipal lots and roadways should be performed at least once per year. An appropriate schedule for street sweeping should be determined based on each municipality's specific needs. Heavy traffic areas can be swept weekly or monthly, depending on a community's available resources. Other locations, such as construction entrances, sand/salt loading areas, vehicle fueling areas, and vehicle and equipment storage areas should be swept on an as needed basis.

The State of Alabama has no formal standards that would not allow municipalities to reuse street sweepings in accordance with the Environmental Fact Sheet shown below. Street sweepings may be reused as long as they do not contain visual evidence of wastewater, animal wastes, oil or other petroleum products. Catch basin residuals must be tested to determine if they may be reused. Table 3-4 lists the compounds, the S-1 limits which allow unrestricted reuse, and the S-3 limits which allow reuse as a road base or subbase. Visually contaminated street and catch basin residuals must also be tested to determine if they contain hazardous wastes.

<b>Table 3-4 Soil Standards Catch Basin Cleanings Reuse Guidance</b>			
Maximum Contaminant Concentrations			
<i>Regulated Contaminant</i>	<i>S-1 Standards (mg/kg)</i>	<i>S-3 Standards (mg/kg)</i>	<i>USEPA SW-846 Test Method</i>
<b>Metals</b>			
Arsenic	11	11	6010B
Barium	750	3,400	6010B
Cadmium	32	230	6010B
Chromium	1000	5,000	6010B
Lead	400	400	6010B
Mercury	13	13	7471A
Selenium	260	260	6010B
Silver	45	200	6010B
<b>VOCs</b>			
Benzene	0.3	0.3	8260B
Dichloroethane, 1,2-	0.08	0.08	8260B
Isopropyl benzene	123	123	8260B
Methyl-t-butyl ether	0.13	0.13	8260B
Toluene	100	100	8260B
Xylene	500	1,100	8260B
<b>Akylbenzenes</b> Butylbenzene, n- Butylbenzene, sec- Butylbenzene, tert- Isopropyl toluene, 4- Propylbenzene, n- Trimethylbenzene, 1,2,4- Trimethylbenzene, 1,3,5-	59 (total)	59 (total)	8260B
<b>PAHs - Carcinogenic</b>			
Benzo(a)anthracene	0.7	40	8270C
Benzo(a)pyrene	0.7	4	8270C
Benzo(b)fluoranthene	7	400	8270C
Benzo(k)fluoranthene	7	400	8270C
Chrysene	70	4,000	8270C
Dibenzo(a,h)anthracene	0.7	4	8270C
Indeno(1,2,3-cd)pyrene	0.7	40	8270C
<b>PAHs - Noncarcinogenic</b>			
Acenaphthene	270	270	8270C
Acenaphthylene	300	300	8270C
Anthracene	1,000	1,700	8270C
Fluoranthene	810	5,000	8270C
Fluorene	510	510	8270C
Methylnaphthalene,2-	150	150	8270C
Napthalene	5	5	8270C
Benzo(g,h,i)perylene Phenanthrene Pyrene	480 (total)	5,000 (total)	8270C

### 3.2 STORM DRAIN SYSTEM MAINTENANCE

Storm drain system maintenance consists of three components: cleaning, repairing (or retrofitting), and upgrading. Historically, storm drain systems have been repaired or upgraded only when catastrophic failures have occurred, such as those causing

flooding, road failures, or severe erosion. The General Permit requires that each Storm Water Management Authority, Inc regulated municipality develop a maintenance schedule for the storm drain system, as well as inspection procedures and schedule for long term control structures. The storm drain mapping currently being performed by JCDH will be presented to each city upon completion. The estimated time frame with current resources should be able to meet the five years required from October 1, 2010. The completion date will hopefully be sooner through cooperative programs with the municipality fire departments and other agencies. This will allow for cities to make better estimates on where to expend fiscal resources to get the biggest impact on Storm Water infrastructure instead of the as-needed maintenance system in place now.

#### *Conveyance System Maintenance*

Section 2.2 of this Manual reviews how JCDH divides a municipality into distinct areas and prioritizes the areas based on their illicit discharge potential. A future component of that evaluation will be to consider the age and material of the infrastructure, which is an indicator of failure potential. This prioritization can be used in the future to aid in developing a maintenance program for the system.

Additional useful resources include the municipal capital budget and the GASB 34 accounting information. All of these items should be reviewed and evaluated to identify where and when repairs, retrofits, and upgrades should be conducted. The storm drain system maintenance program can be developed using a process that is similar to the local pavement management program. The following paragraphs provide guidance to city managers in developing an operation and maintenance program.

- 1) Vitrified clay (terracotta) storm drain pipe, asbestos cement pipe, or corrugated metal pipes in older areas should be replaced or retrofitted as part of other infrastructure work (street reconstruction, or combined sewer overflow (CSO) work). Televising and/or manual inspections should be performed to confirm the degree of repair or replacement necessary.
- 2) An inspection and replacement program should be developed for newer pipes and structures in order to conduct preventative maintenance that can affect long-term cost savings and avert catastrophic failures. The inspection and replacement program should consist of the following items:
  - Storm Drain Pipe/Outfall Cleaning and Inspections



- A cleaning and inspection prioritization should be established by all municipalities for storm drain pipes and outfalls. The City Manager should consider conducting annual inspections on storm drains and outfalls in high priority areas. Less frequent inspections (every 2 to 3 years) should be completed for medium and low priority areas. Inspections for structural conditions should be combined with the inspections for illicit discharges as described in Section 2.4.2. JCDH is helping to aid municipalities in this endeavor through the mapping of the storm drain and outfalls by providing information on the condition and sedimentation loading of each pipe.
- Catch basin Cleaning and Inspection – A prioritization plan should also be established for catch basin cleaning. The prioritization can be completed by the City Manager using the following two considerations: (1) amount of winter sand spread in different areas (this will be zero for most cities but should still be included in the plan), and (2) areas that have historically accumulated a large quantity of sediment or debris. This prioritization should be reviewed and updated frequently. The re-evaluation should use the same two criteria listed above (sand application and historical sediment accumulation). City Managers should identify a reasonable frequency of cleaning based on need, municipal budgets, and personnel availability. JCDH and Jefferson County can provide some assistance to cities without their own capabilities

The Catch Basin Cleaning Form contained in Appendix A, should be used during cleaning as a method to inspect the catch basins to evaluate the integrity of the structure and identify necessary repairs. Any repairs identified on the forms should be incorporated into the municipality's work order system. Communities that outsource catch basin cleaning should either require that the contractor use the inspection form or should consider sending a public works employee, intern, or other municipal representative along with the contractor to evaluate structures. This form will be used by Storm Water Management Authority, Inc and JCDH to estimate the effectiveness of the program so all forms should be

completed and given to the relevant agency.

- Ditches and Swales Maintenance - Many Storm Water Management Authority, Inc municipalities have rural areas, where the storm drain system consists of roadside ditches. Sediment, grass clippings, winter sand, leaves, excess vegetation and other debris periodically impedes the proper function of these ditches and should be removed approximately annually. Ditch cleaning can be conducted manually or using heavy equipment. Ditch cleaning should be conducted during low water periods, minimizing the disturbance to existing vegetation. If existing vegetation is removed during ditch cleaning, the ditch side slopes should be seeded and mulched as soon as possible after dredging. Ditch cleaning with heavy equipment should not be conducted in areas where the ditch carries a perennial stream unless specifically approved by the Army Corp of Engineers. Pesticide use should also be kept to a minimum in these sensitive areas due to their direct impact on waterways.

### *3.3.1 Long Term Control Structure Inspection and Maintenance*

In addition to the storm drain pipes, catch basins and outfalls, long term control structures such as detention ponds, vegetated filter strips, grass swales, and constructed wetlands must be inspected and maintained.

ADEM produces a BMP Manual that tells the design features for these BMPS that must be maintained. JCDH is working on a Manual that will tell the frequency of maintenance needed for these devices and is targeted for release in August 2012. The following table 3-5 provides recommended maintenance requirements from *NHDES BMPs for Urban Stormwater Runoff* to provide some general guidance until the manual can be released.

<b>TABLE 3-5: RECOMMENDED MAINTENANCE ON COMMON LONG-TERM STORMWATER BMPs</b>	
<b>Structure Type</b>	<b>Maintenance Requirements</b>
Extended Detention Pond (Dry)	<p>The embankment should be inspected annually to determine if rodent burrows, wet areas, or erosion of the fill are present. Trees and shrubs should be kept off the embankment and emergency spillway areas.</p> <p>The vegetation should be mowed once per year to discourage woody growth. Vegetation should be managed without the aid of fertilizers.</p> <p>If vegetation is sparse or non-existent, test soils for proper nutrients/growing conditions and re-vegetate with drought-tolerant.</p> <p>Pipe inlets and outlets should be inspected annually and after major storm events.</p> <p>Sediment should be continually checked in the basin and removed as necessary.</p> <p>The structure should be inspected by a qualified professional on a periodic basis.</p>
Vegetated Filter Strips	<p>A properly designed and constructed filter strip should require little maintenance. It should be inspected frequently during the first year of operation and then annually thereafter. Large accumulations of sediments should be removed, and all gullies filled in and stabilized. Areas of bare soil should be immediately stabilized.</p>
Grassed Swales	<p>Swales should be mowed at least once per year to prevent the establishment of woody vegetation.</p> <p>Sediments should be removed as required and swale reseeded if necessary.</p> <p>Grass should not be mowed to less than three inches in height.</p>
Wet Ponds and Constructed Wetlands*	<p>The embankment should be inspected annually to determine if rodent burrows, wet areas, or erosion of the fill are present. Trees and shrubs should be kept off the embankment and emergency spillway areas.</p> <p>The vegetation should be mowed once per year to discourage woody growth. Vegetation should be managed without the aid of fertilizers.</p> <p>Inspect vegetation for invasive species annually and remove if present. Supplement wetland plants if &lt;50% surface is bare. Harvest wetland plants that have been "choked out" by sediment buildup.</p> <p>Pipe inlets and outlets should be inspected annually and after major storm events.</p> <p>Sediment should be continually checked in the basin and removed as necessary.</p> <p>The structure should be inspected by a qualified professional on a periodic basis.</p>

*\*NOTE: Source of information for Constructed Wetlands is USEPA manual of BMPs.*

**Table 3-6**  
**Storm Water Management Authority, Inc**  
**LONG TERM STRUCTURAL CONTROL INSPECTION FORM**

<b>PROJECT NAME:</b>		<b>CITY:</b>
<b>LOCATION:</b>		<b>INSPECTOR NAME:</b>
<b>OWNER:</b>		<b>DATE:</b>
<b>ADDRESS:</b>		<b>DATE OF LAST INSPECTION:</b>
<b>PHONE #:</b>		
<b>CONTACT:</b>		
<b>BMP ID:</b>		
<b>BMP TYPE:</b>	WET RETENTION POND	
<b>ENGINEER OR DESIGNER:</b>		
<b>ADDRESS:</b>		
<b>CONTACT:</b>		
<b>PHONE #:</b>		

**MAINTENANCE INFORMATION**

**MAINTENANCE:**

**COMMENTS:**

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## Storm Water Management Authority, Inc

1400 SIXTH AVENUE SOUTH. P.O. BOX 2648. BIRMINGHAM, ALABAMA 35202. (205)930-1230

### Storm Water Structural Control Form (Municipal Use)

#### FORM

#### Part 1: General Information

Stormwater Municipality: \_\_\_\_\_ Date: \_\_\_\_\_  
Mayor: \_\_\_\_\_  
Contact Person: \_\_\_\_\_

#### Part 2: Existing Storm Water Structural Controls

Estimated Miles of Storm Sewer Inspected: \_\_\_\_\_ miles  
Estimated personnel time spent inspecting: \_\_\_\_\_ hrs  
Structural Controls Fixed: \_\_\_\_\_ estimated # of detention ponds  
\_\_\_\_\_ estimated # of retaining walls  
\_\_\_\_\_ estimated # of ditches repaired  
\_\_\_\_\_ estimated # of head walls  
\_\_\_\_\_ repaired  
\_\_\_\_\_ estimated # of retention ponds

#### Part 3: New Storm Water Structural Controls

Estimated Miles of New Storm Sewer Installed: \_\_\_\_\_  
Estimated Personnel time during installation: \_\_\_\_\_  
Structural Controls Installed: \_\_\_\_\_ estimated # of detention ponds  
\_\_\_\_\_ estimated # of retaining walls  
\_\_\_\_\_ estimated # of ditches repaired  
\_\_\_\_\_ estimated # of head walls  
\_\_\_\_\_ repaired  
\_\_\_\_\_ estimated # of retention ponds

If structural controls are cleaned or maintained by an outside entity (Jefferson County, State of Alabama, etc..) then contract with outside entity should be stabled to this form when returned.

## Storm Water Management Authority, Inc

1400 SIXTH AVENUE SOUTH. P.O. BOX 2648. BIRMINGHAM, ALABAMA 35202. (205)930-1230

### Development Form for Storm Water Structural Controls

Submit in Triplicate  
**Application**

**Part 1: General Information**

Stormwater Municipality: \_\_\_\_\_ Date: \_\_\_\_\_  
 Applicant's Name: \_\_\_\_\_  
 Applicant's email address/ Phone number: \_\_\_\_\_  
 Applicator Company Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_  
 State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Type of Development: \_\_\_\_\_

**Part 2: Engineering Information**

I, \_\_\_\_\_, a \_\_\_\_\_ do hereby certify that the data stated in this report and/or attached sheets are true and accurate as presented.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Reg. # \_\_\_\_\_  
 Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ zip: \_\_\_\_\_ Phone: \_\_\_\_\_

**Part 2: Storm Water Structural Controls Installed**

Estimated Distance of New Storm Pipe Installed: \_\_\_\_\_ Ft.  
 Structural Controls Installed: \_\_\_\_\_ estimated # of detention ponds  
 \_\_\_\_\_ estimated # of retaining walls  
 \_\_\_\_\_ estimated # of ditches repaired  
 \_\_\_\_\_ estimated # of head walls repaired  
 \_\_\_\_\_ estimated # of retention ponds

Estimated Area of Detention Ponds:	1	6
	2	7
	3	8
	4	9
	5	10
Estimated Area of Retention Ponds:	1	6
	2	7
	3	8
	4	9
	5	10

Are there any other structures used for stormwater management if so explain: \_\_\_\_\_

### **3.4 CONSTRUCTION ACTIVITIES AND OTHER LAND DISTURBANCES**

As Storm Water Management Authority, Inc's municipalities perform construction activities and other activities which disturb soil, they take precautions to prevent erosion and runoff of sediment. Road crews and landscaping crews are being trained in erosion and sediment control methods. JCDH is creating publications and training sessions that describe a variety of methods that can be used to reduce the long term impact of sedimentation and erosion on water quality. The material for each municipality should be available by June 2011 and in video form sometime thereafter. Each municipality will then be responsible for making sure any new hires are trained using the video material as well as a refresher course is offered for each existing employee on an annual basis. Erosion and Sedimentation Control SOPs are listed in Appendix C.





#### 4. GLOSSARY OF ACRONYMS

ADEM	Alabama Department of Environmental Management
AST	Aboveground Storage Tank
AU	Assessment Unit
BMP	Best Management Practice
CWP	Center for Watershed Protection
GASB	General Accounting Standards Board
GIS	Geographic Information System
GPS	Geographic Positioning System
HUC	Hydrologic Unit Code
JCDH	Jefferson County Department of Health
IDDE	Illicit Discharge Detection and Elimination
IDP	Illicit Discharge Potential
MEP	Maximum Extent Practical
MCM	Minimum Control Measure
MSDS	Material Safety Data Sheet
MSGP	Multi Sector General Permit
MS4	Municipal Separate Storm Sewer System
NEIWPC	New England Interstate Water Pollution Control Commission

NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
OBM	Optical Brightener Monitoring
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
SIC	Standard Industrial Classification
SOP	Standard Operating Procedure
SPCC	Spill Prevention Control and Countermeasure
TCLP	Toxicity Characteristics Leaching Procedure
TMDL	Total Maximum Daily Load
UNH	University of New Hampshire
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

## **APPENDIX A**

# **ILLICIT DISCHARGE DETECTION AND ELIMINATION SOPS AND FORMS**

## TYPICAL GPS SCREEN EXPLANATION

The screenshot shows the TerraSync application interface on a handheld device. The interface includes a top status bar with the time 10:11 and various icons. Below the status bar are several menu options: 'Data', 'Collect', 'Options', and 'Close'. A 'Create' button is visible next to the 'Options' menu. The main screen displays a file path 'File: JUNO071410A' and a 'Choose Feature:' section with a list of feature types. A 'Create' button is also present next to the 'Choose Feature:' label. The feature list includes 'CLOSED PIPE', 'OPEN CHANNEL', 'TRIBUTARY', 'SITE OF INTEREST', 'Point\_generic', 'Line\_generic', and 'Area\_generic'. The 'CLOSED PIPE' feature is currently selected. A 'Create' button is visible at the bottom of the screen.

**Data Option allows for Mapping, Data Retrieval, Status and Setup**

**Number of Satellites currently reading- JCDH recommends at least 4 but optimal 6**

**Battery Life**

**Amount of Error in ft before post - processing**

**Normally a bullseye for number of points logged- JCDH recommends at Least 30 points taken**

**Data Logger Start Button**

**Create Dataset Button**

**Type of Inventory**

**Collection Sites of Interest each has a separate dictionary and are updated with new options**

Type	Feature Name
<input checked="" type="checkbox"/>	CLOSED PIPE
<input type="checkbox"/>	OPEN CHANNEL
<input type="checkbox"/>	TRIBUTARY
<input type="checkbox"/>	SITE OF INTEREST
<input type="checkbox"/>	Point_generic
<input type="checkbox"/>	Line_generic
<input type="checkbox"/>	Area_generic

<b>Standard Operating Procedure for:</b>	
<b>A.1 IDDE: Inspections During Mapping (JCDH Employees)</b>	
<b>Purpose of SOP:</b>	This SOP provides a basic checklist for JCDH employees conducting illicit discharge inspections during mapping.

**Always:**

- 1) Characterize the outfall by recording information on the Tremble Nomad Unit data dictionary such as:
  - Side of creek
  - GPS location (at least 30 points to post process)
  - Flow present
  - Flow description
  - Material of pipe
  - Shape
  - Diameter, horizontal distance, vertical distance
  - Number of pipes
  - Submerged pipe
  - Sediment filled
  - pH
  - temperature
  - picture of all pipes
- 2) Conduct inspections during dry weather periods using the Dry Weather Outfall Inspection Form or data dictionary shown on the next page if a problem outfall is believed to be discovered
- 3) Follow procedure below if an illicit discharge is encountered (such as raw sewage, paint, etc.).
- 4) Conduct inspections with at least two JCDH employees per crew.
- 5) Carry a list of emergency phone numbers. (All JCDH inspectors are equipped with cell phones)
- 6) Have on JCDH badge at all times

**Whenever Possible:**

- 1) Conduct inspections during low groundwater and leaf off conditions.
- 2) Identify and label the outfall with a unique identifier if outfall is believed to be a problem.
- 3) If dry weather flow is present at the outfall, and the flow **does not** appear to be an illicit discharge attempt to identify the source of the flow (intermittent stream etc.), then document the discharge for future comparison.
- 4) Collect samples of flowing discharges before and after source removal.

**Never:**

- 1) Never put yourself in danger.
- 2) Never enter private property without permission



Figure 1: Tremble Nomad Unit

**Dry Weather Discharge**

The CWP defines **dry weather** as a 48 hour period with no runoff-producing rainfall. JCDH prefers the period to be 72 hours but if continual rain occurs that will be switched to 48 hours as needed.

**Equipment list for mapping:**

1. Entrance and Exit Point Map
2. GPS unit with built in camera
3. Field sheets for any illicit discharge found (can be left in truck)
4. Cell phones
5. pH meter
6. First aid kit
7. Flash light or head lamp
8. Surgical gloves
9. Tape measure
10. Temperature probe
11. Waders
12. Watch with a second hand
13. Hand sanitizer
14. Sampling pole
15. Safety vests

**JCDH Procedure for illicit discharge detection**

- Call supervisor and notify of location
- Take photos and record under Site of Interest in data dictionary on GPS unit as shown below
- Supervisor carries out sample bottles to be taken to lab for a rush sample
- Area is then visually inspected for the possible sources.
- If no source can be identified then wait for sample results to come back to see what possible contaminants are. At this point a further investigation will be launched. This can include but is not limited to 24 hour ISCO sampling, damming, etc.

## Dry Weather Outfall Inspection Form

**Location Information**

**Date:** \_\_\_\_\_ **Inspector:** \_\_\_\_\_  
**Time:** \_\_\_\_\_  
**Outfall ID:** \_\_\_\_\_  
**Outfall Location:** \_\_\_\_\_  
**Receiving Waterbody:** \_\_\_\_\_  
**Photo Taken:** Yes No **Photo ID:** \_\_\_\_\_

**Weather:** Clear Cloudy **Approximate Temp:** \_\_\_\_\_ **Wind Present:** Yes No  
**Precipitation in the past 3 days:** No Yes \_\_\_\_\_ inches

**Pipe Flow:** None Trickle Steady 1/4 pipe flow or more  
**Seepage Flow:** None Trickle Steady 1/4 pipe flow or more  
**Color (if flow is present):** \_\_\_\_\_

**Inspection Information** *Select all that are applicable*

Obvious Debris/Pollution:	0	3	5	8	9	9	10	Odor:	0	5	10	10	Water Clarity:	0	5	10
None								None/Natural					Clear			
Foam								Musty					Cloudy			
Staining								Sewage/septic								
Floating Green Scum								Petroleum					Opaque			
Oil / Film																
Vegetative Mat/or Gray Mat																
Sewage Solids																
<b>TOTAL</b>								<b>TOTAL</b>					<b>TOTAL</b>			

**GRAND TOTAL SCORE =**

**Additional Information**

**Sediment Condition:** Open 1/4 Full 1/2 Full 3/4 Full Plugged  
**Structure Condition:** Excellent Good Fair Poor  
**Trash/litter present:** Yes No **Yard waste observed:** Yes No  
**General Comments:** \_\_\_\_\_

**Potential Sources / Actions Taken:**

**Sample collected?** Yes No  
 By whom? \_\_\_\_\_  
**Follow up required:** Yes No

**Parameters: Results:**

**Be sure to staple all relevant lab tests and assigned GPS points and photos to sheet during investigation.**

**NOTE: This information is to accompany the Dry Weather Outfall Inspection Form.**

**Odor** – Most strong odors, especially gasoline, oils, and solvents are likely associated with high responses on the toxicity screening test.

*Stale sanitary wastewater:* sewage

*Detergent, perfume:* Laundromat or household laundry

*Sulfur ("rotten eggs"):* industries that discharge sulfide compounds or organics (meat packers, canneries, dairies)

*Oil and gas:* facilities associated with vehicle maintenance or petroleum product storage (gas stations) or petroleum refineries

*Rancid-sour:* food preparation facilities (restaurants, hotels)

**Color** – Important indicator of inappropriate industrial sources. Dark colors, such as brown, gray, or black are the most common.

*Yellow:* chemical plants, textile, and tanning plants

*Brown:* meat packers, printing plants, metal works, stone and concrete, fertilizers, and petroleum refining facilities [note: can be from natural organic acids if a wetland is upstream]

*Green:* chemical plants, textile facilities

*Red:* meat packers [note: can be from organic acids if a wetland is upstream]

*Gray:* dairies

**Turbidity** – The cloudy appearance of water caused by the presence of suspended or colloidal matter. In dry weather, high turbidity is often a characteristic of undiluted industrial discharges.

*Cloudy:* sanitary wastewater, concrete or stone operations, fertilizer facilities, automotive dealers

*Opaque:* food processors, lumber mills, metal operations, pigment plants

**Floatable matter** – a contaminated flow may contain floating solids or liquids directly related to industrial or sanitary wastewater pollution. Floatables of industrial origin may include animal fats, spoiled food, oils, solvents, sawdust, foams, packing materials, or fuel.

*Oil sheen:* petroleum refiners or storage facilities and vehicle service facilities. [note: there is a type of bacteria that looks like an oil sheen. If you take a stick and swirl around the sheen, it will break up into blocky pieces if it is the bacteria. A true oil sheen will quickly re-form and not look blocky.]

*Toilet paper bits, fecal bits, food particles:* sanitary wastewater

*Soap suds:* if white or a clear sheen, laundry discharge (check odor) [note: can also occur from natural surfactants; usually off-white or tan with an earthy-fishy odor.]

**Deposits and Stains** – Any type of coating near the outfall, usually a dark color. Deposits and stains will often contain fragments of floatable substances.

*Lots of sediment:* construction site erosion, sand and gravel pits, winter road applications

*Oil stain:* petroleum storage, vehicle service facilities, petroleum refineries

*Rusty:* precipitates from iron-rich water (natural or industrial) [note: if slimy and clumpy, it could be iron bacteria]

*Grayish-black deposits and hair:* leather tanneries

*White crystalline powder:* nitrogenous fertilizer waste

**Vegetation** – Vegetation surrounding an outfall may show the effects of industrial pollutants. Decaying organic materials coming from various food product wastes would cause an increase in plant life, while the discharge of chemical dyes and inorganic pigments from textile mills could noticeably decrease vegetation. It is important not to confuse the adverse effects on high Storm Water flows on vegetation with highly toxic dry-weather intermittent flows.

*Excessive growth:* food product facilities, fertilizer runoff (lawns, golf courses, and farms)

*Inhibited growth:* high Storm Water flows, beverage facilities, printing plants, metal product facilities, drug manufacturing, petroleum facilities, vehicle service facilities, and automobile dealers

**Damage to Outfall Structures** – Outfall damage can be caused by severely contaminated discharges that are very acidic or basic in nature. Primary metal industries have a strong potential to cause outfall structure damage because their batch dumps are highly acidic. Poor construction, hydraulic scour, and old age can also negatively affect the condition of all outfall structure.

*Concrete or spalling (breaking off into chips or layers):* industrial flows

*Peeling paint:* industrial flows

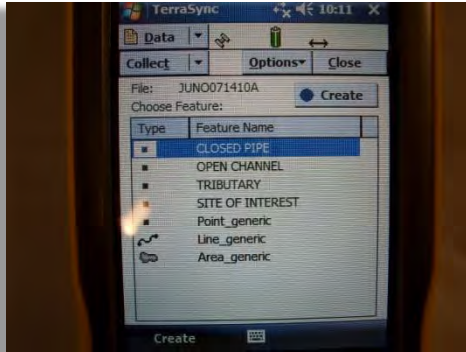
*Metal corrosion:* industrial flows

This sheet was courtesy of the NHDES (modified from Pitt et al., 1993 Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems: a User's Guide. EPA Office of research and Development, EPA/600/R-92/238).



## Data Dictionary Screen Shots Typical Example

The data dictionary is used on the GPS units to allow for easy waterproof form carrying. The options can be changed and the screen shots presented are just a sample of what JCDH is using currently. This helps to keep the paper forms like the ones above strictly for documentation purposes.



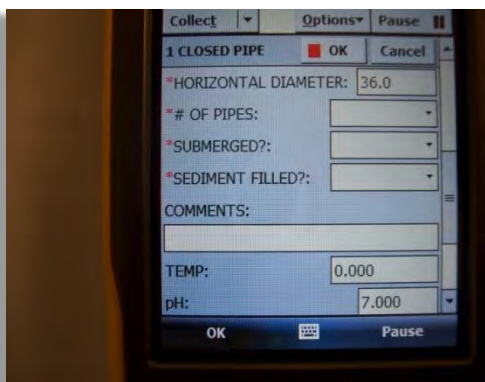
- Options:
- Closed Pipe
  - Open Channel
  - Tributary
  - Site of Interest

Opening Screen for Outfall Monitoring



- Option chose (Closed Pipe)  
Secondary Options:
- Side of Creek
  - Flow Present
  - Flow Type
  - Flow Description
  - Pipe Material
  - Shape
  - Vertical Diameter

Closed Pipe Outfall (Page 1)



- Option chose (Closed Pipe)  
Secondary Options:
- Horizontal Diameter
  - Number of Pipes
  - Submerged
  - Sediment Filled
  - Comments
  - Temperature
  - pH

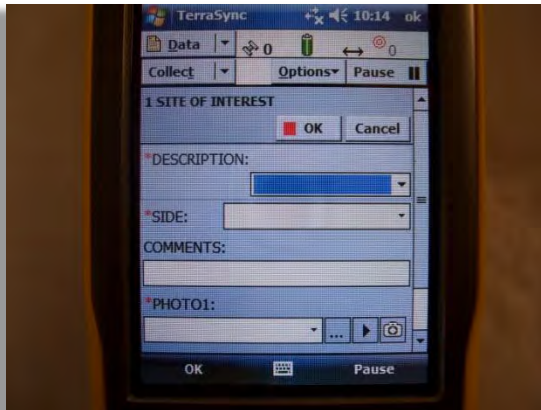
Closed Pipe Outfall (Page2)



Option chose (Closed Pipe)  
Photo Attachment Options:

- Photo 1
- Photo 2

Closed Pipe Outfall (Page3)



Site of Interest:

- Description
- Side of Creek
- Comments
- Photo

Site of Interest for logging Illicit or Suspicious Discharges

<b>Standard Operating Procedure for:</b>	
<b>A.2 IDDE: Long-Term Inspections –Dry Weather (JCDH Employees)</b>	
<b>Purpose of SOP:</b>	To provide supervisor and field crew with a punch list of things to remember during regularly scheduled inspections.

**Always:**

- 1) Conduct inspections during dry weather periods (48-72 hours after rain event).
- 2) Check the outfall's dimensions, shape, and component material using the GPS data dictionary with the existing site name in the data dictionary
- 3) Characterize and record observations on basic sensory and physical indicators (e.g., odor, color, oil sheen).
- 4) If an illicit discharge is encountered (such as raw sewage, paint, etc.), follow the procedure below.
- 5) Perform inspections so as to meet JCDH's goal of inspecting each outfall within the 5 year permit cycle (long term).
- 6) Take pictures in the data dictionary for later inspections and GIS maps.
- 7) Always have on JCDH badge when doing inspections

**Whenever Possible:**

- 1) Identify and label the outfall with a unique identifier. For example "SWO-013".
- 2) If dry weather flow is present at the outfall, and the flow does not appear to be an obvious illicit discharge (e.g., flow is clear, odorless, etc.), attempt to identify the source of the flow (intermittent stream, etc.) then document the discharge for future comparison.
- 3) Collect samples before and after source removal.

**Never:**

- 1) Never put yourself in danger.
- 2) Never enter private property without permission.

**JCDH Procedure for illicit discharge detection**

- Call supervisor and notify of location
- Take photos and record under Site of Interest in data dictionary on GPS unit as shown below
- Supervisor carry out sample bottles to be taken to lab for a rush sample
- Area is then visually inspected for the possible sources.
- If no source can be identified, wait for sample results to provide information on possible contaminants. At this point a further investigation will be launched. This can include but is not limited to 24 hour ISCO sampling, damming, etc.

<b>Standard Operating Procedure for:</b>	
<b>A.2 IDDE: Long-Term Inspections –Wet Weather (JCDH Employees)</b>	
<b>Purpose of SOP:</b>	To provide supervisor and field crew with a punch list of things to remember during regularly scheduled inspections.

**Always:**

- 8) Conduct inspections during flow events, or as close to a rain event as possible. (no longer than 6 hours)
- 9) Check the outfall's dimensions, shape, and component material using the GPS data dictionary with the existing site name in the data dictionary
- 10) Characterize and record observations on basic sensory and physical indicators (e.g., odor, color, oil sheen).
- 11) If an illicit discharge is encountered (such as raw sewage, paint, etc.), follow the procedure below.
- 12) Perform inspections so as to meet JCDH's goal of inspecting each outfall within the 5 year permit cycle (long term).
- 13) Take pictures in the data dictionary for later inspections and GIS maps.
- 14) Always have on JCDH badge when doing inspections

**Whenever Possible:**

- 4) Identify and label the outfall with a unique identifier. For example "SWO-013".
- 5) Collect samples before and after source removal.

**Never:**

- 3) Never put yourself in danger.
- 4) Never enter private property without permission.

**JCDH Procedure for illicit discharge detection**

- Call supervisor and notify of location
- Take photos and record under Site of Interest in data dictionary on GPS unit as shown below
- Supervisor carry out sample bottles to be taken to lab for a rush sample
- Area is then visually inspected for the possible sources.
- If no source can be identified, wait for sample results to provide information on possible contaminants. At this point a further investigation will be launched. This can include but is not limited to 24 hour ISCO sampling, damming, etc.

<b>Standard Operating Procedure for:</b>	
<b>A.3 IDDE: Opportunistic Inspections (Non JCDH Employees)</b>	
<b>Purpose of SOP:</b>	This SOP provides city field personnel with a quick checklist of proper procedures to follow if they observe illicit discharges while conducting their regular duties.

**Always:**

- 1) Call dispatcher, supervisor, or JCDH official if you see evidence of an illicit discharge. (If not a JCDH employee). If JCDH employee notify supervisor or follow illicit discharge procedure.
- 2) Assess the general area of the illicit discharge to see if you can identify its' source.

**Whenever Possible:**

- 1) Use the Incident Tracking Sheet to document observations.
- 2) Take photographs of the illicit discharge.
- 3) Get Supervisor to fill out Illicit Discharge Form.
- 4) Use the Catch Basin Cleaning Form to document observations during cleaning.

**Never:**

- 1) Never enter private property without permission.
- 2) Never put yourself in danger.

<b>Standard Operating Procedure for:</b>	
<b>A.4 IDDE: Citizen Call-in Inspections (JCDH Employees and Municipal Officials)</b>	
<b>Purpose of SOP:</b>	To collect appropriate information from a citizen reporting a potential illicit discharge to increase the chances of identifying and removing its source.

**Always:**

- 1) Use the JCDH complaint system and call in line at (205)930-1230. The Incident Tracking Sheet below can provide an additional document to collect the appropriate information that then should be entered into JCDH complaint system
- 2) Investigations should be worked with in 5-7 business days and the status should be reported on the complaint system.
- 3) All action taken should be recorded.
- 4) Follow JCDH procedures on complaints for any additional information
- 5) All municipal employees should call in the complaint to JCDH at (205)930-1230 for tracking purposes

**Whenever Possible:**

- 1) Provide additional training on tracking stormwater complaints
- 2) Generate GIS databases from information taken from complaints to scan for any patterns of illicit discharges

**Never:**

- 1) Never enter private property without permission.
- 2) Never put yourself in danger.

## ILLICIT DISCHARGE HOTLINE INCIDENT TRACKING SHEET

Copied with permission from: *Illicit Discharge Detection and Elimination-A Guidance Manual for Program Development and Technical Assessments*, CWP, 2004.

<b>Incident ID:</b>				
<b>Responder Information</b>				
Call taken by:			Call date:	
Call time:			Precipitation (inches) in past 24-48 hrs:	
<b>Reporter Information</b>				
Incident time:			Incident date:	
Caller contact information ( <i>optional</i> ):				
<b>Incident Location</b> ( <i>complete one or more below</i> )				
Latitude and longitude: Or other coordinate system				
Stream address or outfall #:				
Closest street address:				
Nearby landmark:				
<b>Primary Location Description</b>		<b>Secondary Location Description:</b>		
Stream corridor ( <i>In or adjacent to stream</i> )		Outfall	In-stream flow	Along banks
Upland area ( <i>Land not adjacent to stream</i> )		Near storm drain	Near other water source (storm water pond, wetland, etc.):	
Narrative description of location:				
<b>Upland Problem Indicator Description</b>				
Dumping		Oil/solvents/chemicals	Sewage	
Wash water, suds, etc.		Other: _____		
<b>Stream Corridor Problem Indicator Description</b>				
Odor	None	Sewage	Rancid/Sour	Petroleum (gas)
	Sulfide (rotten eggs); natural gas	Other: Describe in "Narrative" section		
Appearance	"Normal"	Oil sheen	Cloudy	Suds
	Other: Describe in "Narrative" section			
Floatables	None:	Sewage (toilet paper, etc)	Algae	Dead fish
	Other: Describe in "Narrative" section			
Narrative description of problem indicators:				
Suspected Violator (name, personal or vehicle description, license plate #, address, etc.):				

<b>Standard Operating Procedure for:</b>	
<b>A.5 IDDE: Septic System Inspections (JCDH Employees and Municipal Employees)</b>	
<b>Purpose of SOP:</b>	Failed septic systems can adversely impact water quality. This SOP provides a quick reference list to supervisors and field crews that are conducting an initial screening for failures in areas that are identified in the full IDDE program.

**Always:**

- 1) Refer potential septic tank issues to JCDH (205)903-1230 if a municipal employee.
- 2) JCDH refer all septic tank issues to Community Environmental Protection Division. They will follow internal procedures to have all issues resolved. Monitor to make sure work is being completed.
- 3) Inform homeowner that they have a leak and that action needs to be taken to remediate the problem such as tank pumping until problem can be resolved

**Whenever Possible:**

- 1) Screen high risk areas (older areas or areas near lakes or impaired waterbodies). JCDH keeps a record of all septic tank malfunctions and what areas are more likely for malfunctions
- 2) Look for indicators of failures, such as wet areas or disagreeable odors near the leach field.
- 3) JCDH documents all septic tank systems as they are installed and what repairs are issued.

**Never:**

- 1) Never enter private property without permission.
- 2) Never put yourself in danger.

Related References	
	Jefferson County Department of Health Community Environmental Protection Division Environmental Health Services 1400 Sixth Avenue South Birmingham, AL 35233 (205)930-1230



<b>Standard Operating Procedure for:</b>	
<b>A.6 IDDE: Tracing Illicit Discharges (JCDH Employees)</b>	
<b>Purpose of SOP:</b>	To provide a quick reference list of items to keep in mind during tracing activities to efficiently and systematically identify the source of an illicit discharge.

**Always:**

- 1) Review / consider information collected when illicit discharge was initially identified (Incident Tracking Sheet from municipality, Data Dictionary from JCDH, or Dry Weather Outfall Inspection Form can all be used for this purpose).
- 2) Survey the general area / surrounding properties to identify potential sources of the illicit discharge as a first step. If discharge is fecal or similar JCDH takes enforcement action immediately and then educates homeowner using pamphlets, flyers, or talks to communities about ways to eliminate these issues.
- 3) JCDH traces illicit discharges using visual inspections of upstream points as a secondary step.
- 4) JCDH documents tracing results for future reference.
- 5) JCDH uses analysis software to tell if there are illicit discharges between set sample points and then uses personnel to track these discharges

**Whenever Possible:**

- 1) JCDH can employ the use of weirs, sandbags, dams, or optical brightener monitoring traps to collect or pool intermittent discharges during dry weather for further inspection.
- 2) Although rarely used by JCDH, televising of the storm drain system can be used trace high priority, difficult to detect illicit discharges.
- 3) JCDH dye tests, with a fluorescent green dye, the individual discharge points within suspected buildings.
- 4) If the source cannot be found, it is added to the area GIS database for future inspection programs.
- 5) Samples are always taken by JCDH usually in pairs to confirm/refute illicit discharge.

**Never:**

- 1) Never enter private property without permission.
- 2) Never put yourself in danger.

<b>Standard Operating Procedure for:</b>	
<b>A.7 IDDE: Removing Illicit Discharges (JCDH and Municipal Employees)</b>	
<b>Purpose of SOP:</b>	Proper removal of an illicit discharge will ensure it does not recur. Using legal methods for the removal will minimize the municipality's liability. This SOP provides an overview of illicit discharge removal procedures.

**Always:**

- 1) Determine who is financially responsible; and follow associated procedures on Table 2-9.
- 2) Suspend access to storm drain if threats of death or serious physical harm to humans or the environment are possible.
- 3) If the discharge is from an exempt facility (see Table 2-9) notify the facility operator and the appropriate enforcement authority.
- 4) Repair/correct cause of discharge if municipality is responsible.
- 5) Collect a confirmatory sample after the removal. Seek technical assistance from JCDH, if needed.
- 6) Seek fining methods through the *Erosion and Sedimentation Control Ordinance* or through municipal codes. Each day of discharge will constitute a separate offense.
- 7) Work with guilty party to solve issue as much as possible.

**Whenever Possible:**

- 1) Issue a Notice of Violation for violations of the *Erosion and Sedimentation Control Ordinance* adopted by all Storm Water Management Authority, Inc municipalities.

**Never:**

- 1) Never repair/correct cause of discharge on private property until all organizations have met and decided what is the best course of action (JCDH Storm Water program, Mayor, City Official, etc.)

<b>TABLE 2-9: NOTIFICATION AND REMOVAL PROCEDURES FOR ILLICIT DISCHARGES INTO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM</b>			
<b>Financially Responsible Party</b>	<b>Source Identified</b>	<b>Enforcement Authority</b>	<b>Procedure to Follow</b>
Private Property Owner	One-time illicit discharge (e.g., spill, dumping, etc.)	Ordinance enforcement authority (Municipal Official, JCDH)	<ul style="list-style-type: none"> <li>• Contact Owner</li> <li>• Issue Notice of Violation</li> <li>• Issue fine</li> </ul>
Private Property Owner	Intermittent or continuous illicit discharge from legal connection	Ordinance enforcement authority (Municipal Official, JCDH)	<ul style="list-style-type: none"> <li>• Contact Owner</li> <li>• Issue Notice of Violation</li> <li>• Determine schedule for removal</li> <li>• Confirm removal</li> </ul>
Private Property Owner	Intermittent or continuous illicit discharge from illegal connection or indirect (e.g., infiltration or failed septic)	Plumbing Inspector, Municipal Official, JCDH	<ul style="list-style-type: none"> <li>• Notify plumbing inspector</li> </ul>
Municipal	Intermittent or continuous illicit discharge from illegal connection or indirect (e.g., failed sewer line)	Ordinance enforcement authority (JCDH, Municipal Official, Jefferson County Environmental Services)	<ul style="list-style-type: none"> <li>• Issue work order</li> <li>• Schedule removal</li> <li>• Remove connection</li> <li>• Confirm removal</li> </ul>
Exempt 3 <sup>rd</sup> Party <ul style="list-style-type: none"> <li>• Alabama Department of Transportation ALDOT (in selected urbanized areas)</li> <li>• Industrial Facilities with selected SIC codes</li> </ul>	Any	USEPA	<ul style="list-style-type: none"> <li>• Notify exempt third party and USEPA of illicit discharge</li> </ul>

<b>Standard Operating Procedure for:</b>	
<b>A.8 IDDE: Removing Industrial Illicit Discharges (JCDH and Municipal Employees)</b>	
<b>Purpose of SOP:</b>	Proper removal of an industrial illicit discharge will ensure it does not recur. Using legal methods for the removal will minimize the municipality's liability. This SOP provides an overview of industrial illicit discharge removal procedures.

**Always:**

- 1) Determine who is financially responsible; and follow associated procedures on Table 2-9.
- 2) Suspend access to storm drain if threats of death or serious physical harm to humans or the environment are possible.
- 3) If the discharge is from an exempt facility (see Table 2-9) notify the facility operator and the appropriate enforcement authority.
- 4) Repair/correct cause of discharge if industrial discharge is from a municipal source
- 5) Collect a confirmatory sample after the removal. Seek technical assistance from JCDH, if needed.
- 6) Seek fining methods through the *Erosion and Sedimentation Control Ordinance* or through municipal codes. Each day of discharge will constitute a separate offense. These offenses may be subject to escalated fees according to municipal or other ordinances.
- 7) Work with guilty party to solve issue as much as possible. Use environmental engineer for facility when possible, these have been identified from the existing Air Toxins program at JCDH

**Whenever Possible:**

- 1) Issue a Notice of Violation for violations of the *Erosion and Sedimentation Control Ordinance* adopted by all Storm Water Management Authority, Inc municipalities.
- 2) GIS locate all NPDES discharge sites for all industrial sources within the Storm Water Management Authority, Inc municipalities.
- 3) Work with ADEM to check all NPDES permit limits to make sure industrial sources are within allowed limits

**Never:**

- 1) Never repair/correct cause of discharge on private property until all organizations have met and decided what is the best course of action (JCDH Storm Water program, Mayor, City Official, etc.)

## **APPENDIX B**

# **POLLUTION PREVENTION AND GOOD HOUSEKEEPING SOPS**

<b>Standard Operating Procedure for:</b>	
<b>B.1 Catch Basin Cleaning (Municipal or Jefferson County Public Works Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by maintaining the ability of catch basins to trap sediments, organic matter, and litter. This reduces clogging in the storm drain system as well as the transport of sediments and pollutants into receiving waterbodies.

**Always:**

- 1) Inspect catch basins for structural integrity and evidence of illicit discharges during cleaning. Use the Catch Basin Cleaning Form.
- 2) If gross contamination (sewage or oil), stop cleaning and report to supervisor for follow up. The supervisor should then report this to JCDH at (205)930-1230.
- 3) Stockpile and cover catch basin residuals on an impervious surface that discharges to a sanitary sewer or buffered area until test results are known (if reuse is planned).
- 4) Test catch basin stockpile as follows:
  - If obviously (by visual and/or olfactory examination) contaminated with sanitary wastewater, animal wastes, oil, gasoline or other petroleum products, test the solids pursuant to the hazardous waste determination dispose of as follows:
    - a) If non-hazardous – dispose at any permitted, lined solid waste landfill or other solid waste treatment facility permitted to accept this material.
    - b) If hazardous – dispose of in accordance with Alabama Hazardous Waste Rules.
  - If not obviously contaminated,
    - a) Test for metals, VOCs and PAHs.
    - b) Compare with the following charts used by New Hampshire or relevant Alabama used charts.

**Whenever Possible:**

- 1) Inspect each catch basin at least annually, during catch basin cleaning. These forms will need to be reported to JCDH for record keeping unless the municipality has a record keeping process in place.
- 2) Create an internal checklist for catch basins to help classify which catch basins require maintenance and how often.
- 3) Perform street sweeping on an appropriate schedule to reduce the amount of sediment, debris and organic matter entering the catch basins, which in turn reduces the frequency with which they will need to be cleaned. The street sweeping schedules should be provided to JCDH or Storm Water Management Authority, Inc and tracked on a monthly basis by each municipality
- 4) Discharge fluids collected during catch basin cleaning to a sanitary WWTP, or buffered detention area.
- 5) The forms listed below should be completed and turned into JCDH on a monthly basis. This allows for miles of street swept and number of catch basins cleaned each year.



<b>Catch Basin Cleanings Reuse Guidance</b>			
Maximum Contaminant Concentrations			
<i>Regulated Contaminant</i>	<i>S-1 Standards (mg/kg)</i>	<i>S-3 Standards (mg/kg)</i>	<i>USEPA SW-846 Test Method</i>
<b>Metals</b>			
Arsenic	11	11	6010B
Barium	750	3,400	6010B
Cadmium	32	230	6010B
Chromium	1000	5,000	6010B
Lead	400	400	6010B
Mercury	13	13	7471A
Selenium	260	260	6010B
Silver	45	200	6010B
<b>VOCs</b>			
Benzene	0.3	0.3	8260B
Dichloroethane, 1,2-	0.08	0.08	8260B
Isopropyl benzene	123	123	8260B
Methyl-t-butyl ether	0.13	0.13	8260B
Toluene	100	100	8260B
Xylene	500	1,100	8260B
Aklylbenzenes Butylbenzene, n- Butylbenzene, sec- Butylbenzene, tert- Isopropyl toluene, 4- Propylbenzene, n- Trimethylbenzene, 1,2,4- Trimethylbenzene, 1,3,5-	59 (total)	59 (total)	8260B
<b>PAHs - Carcinogenic</b>			
Benzo(a)anthracene	0.7	40	8270C
Benzo(a)pyrene	0.7	4	8270C
Benzo(b)fluoranthene	7	400	8270C
Benzo(k)fluoranthene	7	400	8270C
Chrysene	70	4,000	8270C
Dibenzo(a,h)anthracene	0.7	4	8270C
Indeno(1,2,3-cd)pyrene	0.7	40	8270C
<b>PAHs – Noncarcinogenic</b>			
Acenaphthene	270	270	8270C
Acenaphthylene	300	300	8270C
Anthracene	1,000	1,700	8270C
Fluoranthene	810	5,000	8270C
Fluorene	510	510	8270C
Methylnaphthalene,2-	150	150	8270C
Napthalene	5	5	8270C
Benzo(g,h,i)perylene Phenanthrene Pyrene	480 (Total)	5,000 (Total)	8270C



<b>Standard Operating Procedure for:</b>	
<b>B.2 Storm Drain System Repair and Maintenance (Municipal or Jefferson County Public Works Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by replacing or repairing components of the storm drain system on a regular basis to prevent a failure of the storm drain system.

**Always:**

- 1) Practice preventive maintenance for cracks, leaks, and other conditions that could cause breakdowns in the system by identifying maintenance issues such as:
  - For catch basins during catch basin cleaning (see SOP B.1)
  - For outfalls during IDDE inspection (see SOP A.1, A.2 and A.3)
- 2) Repair defective structures or equipment identified during an inspection as soon as possible.
- 3) Test and dispose of stockpiled materials as described in SOP B.1.
- 4) Document inspections, cleanings and repairs and report them to Storm Water Management Authority, Inc or JCDH (SOP B.1 for catch basins, SOPs A.1 through A.3 for outfalls, and attached example form for pipes).
- 5) Use appropriate erosion and sediment control practices when performing repairs.

**Whenever Possible:**

- 1) Practice preventive maintenance for pipes by televising:
  - Prior to reconstruction of roadways, or
  - On a regular schedule beginning with high priority areas.
  - Or track all televising of sewer lines by Jefferson County Environmental Services.
- 2) Research and implement new technology that will improve the overall performance of the storm drain system.
- 3) Perform street sweeping on a regular basis to reduce the amount of sediment, debris and organic matter entering the storm drain system, which in turn reduces the frequency with which the system will need to be cleaned. This activity will need to be tracked and presented to Stormwater Management Authority or JCDH on a monthly basis.
- 4) Use documentation of repairs and maintenance to develop a capital improvement and O&M plan for future system maintenance. This should be written in an overall city document plan.

**Never:**

- 1) Never allow defective equipment or structures to go unrepaired.

Related References	
	-USEPA National Menu of BMPS -Alabama Soil and Conservation Committee’s <i>Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management of Construction Sites and Urban Areas</i>

<b>B.3 Erosion and Sediment Control (All Organizations)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water from pollution by reducing or eliminating pollutant loading from land disturbing activities.

**Always:**

- 1) Use erosion control techniques or devices to stabilize disturbed areas.
- 2) Use effective site planning to avoid sensitive areas.
- 3) Keep land disturbance to a minimum.
- 4) Inspect and maintain erosion control devices after each 0.75 inches of rain
- 5) Install erosion control devices properly.
- 6) Remove sediment accumulated during construction from permanent BMPs once construction is completed.
- 7) Minimize the amount of bare soil by scheduling phases of construction and stabilization.
- 8) Minimize slope lengths.
- 9) Monitor practices and adjust, maintain, and repair them periodically and after every storm.
- 10) Reduce the velocity of Storm Water runoff.
- 11) Prevent erosion by covering bare soil with mulch or other cover.
- 12) Protect existing Storm Water structures from sediment by using temporary sediment traps, silt fence, or perforated risers.
- 13) Divert clean water around construction site.
- 14) Make sure all permitting has been done and approved through JCDH and the local Stormwater Management Authority municipality. See form on next page for electronic permit.
- 15) Allow 3-14 business days for initial review time on large commercial developments.

**Whenever Possible:**

- 1) Limit construction activities during months with higher runoff rates.
- 2) Install erosion control blankets when seeding drainage ways.
- 3) Protect natural vegetation, especially near waterbodies, wetlands, and steep slopes.
- 4) Establish vegetative cover with good root systems prior to freeze/thaw cycles.

**Never:**

- 1) Never divert runoff into a sensitive area.
- 2) Never remove temporary measures before construction is complete.
- 3) Never allow silt fences to over-run or put in flow paths.

Related References	
	-USEPA National Menu of BMPS -Alabama Soil and Conservation Committee's <i>Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management of Construction Sites and Urban Areas</i>

### JCDH EROSION AND SEDIMENTATION CONTROL PERMITTING FORM

The screenshot shows a web browser window titled "Erosion Control System Entry/Maintenance - Windows Internet Explorer". The address bar shows "http://localhost:55285/EHEroCUI/EHEC02.aspx". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The browser's address bar also shows "http://localhost:55285/EHEroCUI/EHEC02.aspx". The browser's status bar shows "Local intranet | Protected Mode: Off".

The form is titled "Erosion Control System Entry/Maintenance" and is divided into several sections:

- Muni Information:** Includes fields for "City of:" (dropdown), "Year:" (text), "City Cd:" (text), "Sequence:" (text), "Permit:" (text), "Date:" (calendar), "Fee Amount:" (text), and a "JCDH Issued" checkbox.
- Type of Construction:** Includes a "Type:" radio button group with options "Single Family" and "Commercial".
- Applicant Information:** Includes fields for "Name of Applicant:" (text), "Apartment:" (text), "Number:" (text), "Name:" (text), "Type:" (dropdown), "Dir:" (dropdown), "Address:" (text), "City:" (text), "State:" (text), "Zip:" (text), "Phone Nbr:" (text), "Fax:" (text), and "Email Address:" (text).
- Property Owner Information:** Includes a "Same as Applicant Information" checkbox, "Name of Property Owner:" (text), "Apartment:" (text), "Number:" (text), "Name:" (text), "Type:" (dropdown), "Dir:" (dropdown), "Address:" (text), "City:" (text), "State:" (text), "Zip:" (text), "Phone Nbr:" (text), and "Fax:" (text).
- Property Location Information:** Includes a "Same as Applicant Information" checkbox, "Apartment:" (text), "Number:" (text), "Name:" (text), "Type:" (dropdown), "Dir:" (dropdown), "Address:" (text), "City:" (text), "State:" (text), "Zip:" (text), and "Legal Description:" (text area).
- Contractor Information:** Includes a "Same as Applicant Information" checkbox.

The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time "1:34 PM".

<b>Standard Operating Procedure for:</b>	
<b>B.4 Landscape Design and Management (All Organizations)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by designing and managing landscaping in ways that minimize polluted runoff.

**Always:**

- 1) Design landscaping by taking into account soil types, light, drainage, desired maintenance level and budget. A soil map is attached on the following page of Jefferson County but for further soil information go to <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- 2) Design for ease of maintenance.

**Whenever Possible:**

- 1) Minimize erosion prone steep slopes by using techniques such as terracing.
- 2) Use native plants that are pest resistant. Plant the right plant in the right area.
- 3) Manage water runoff by rerouting gutters away from storm drains and maintaining groundcovers between developed areas and waterways (ditches, swales, shorelines).
- 4) Reduce or eliminate mown lawn in unused areas.
- 5) Convert excess lawn to meadow or forest.
- 6) Establish set back distances from pavement, storm drains, and waterbodies. Allow these areas to serve as buffers with disease-resistant plants and minimal mowing.
- 7) JCDH and the Stormwater Municipalities promote Low Impact Development Design on new structures and retrofits.

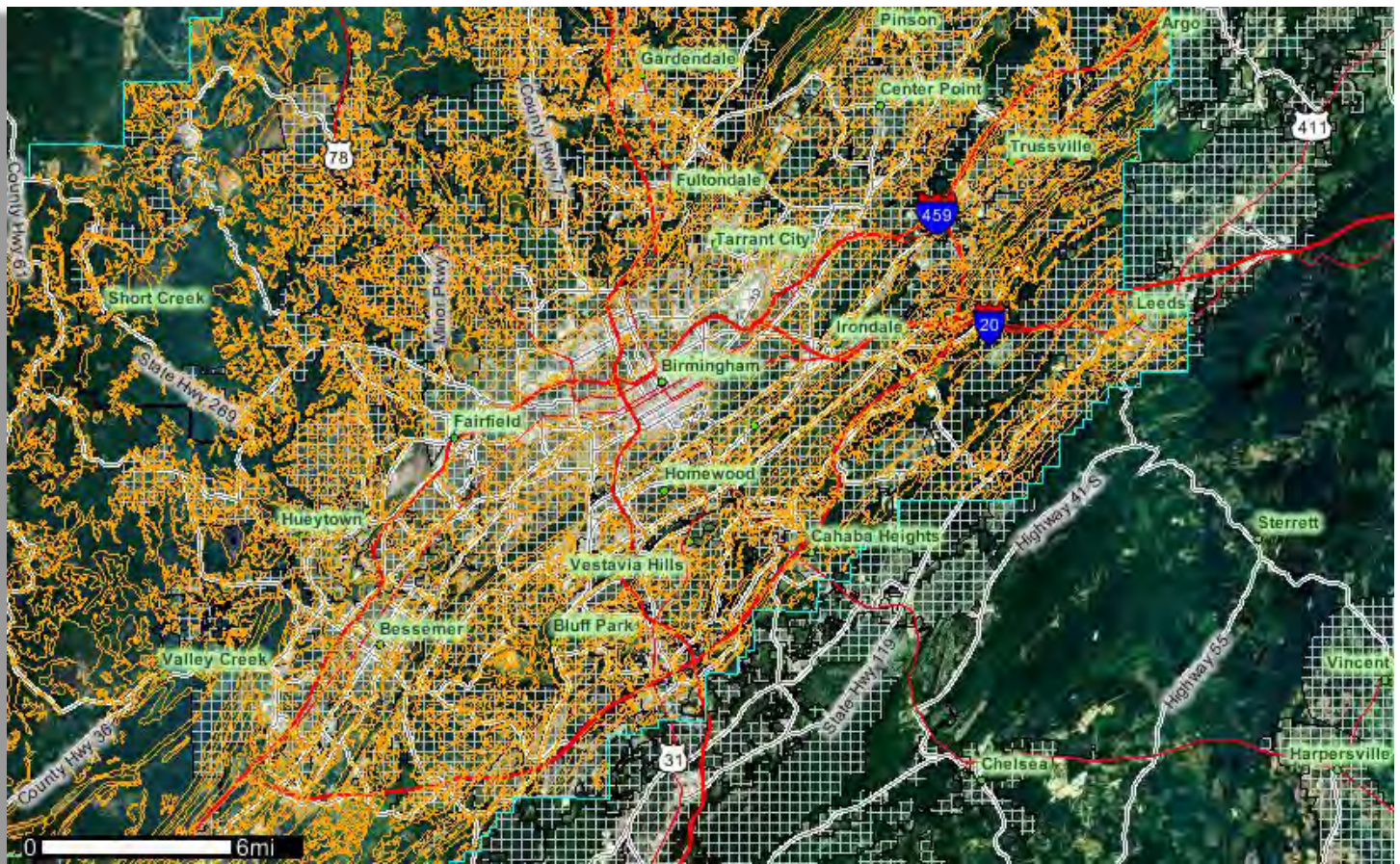
**Never:**

- 1) Never develop a landscape design without assessing its impact on water quality.
- 2) Never cause unintended consequences such as
  - Planting large variety trees beneath overhead wires.
  - Blocking site distance at intersections
  - Planting trees with a high water demand (weeping willow) near sanitary sewer pipes and storm sewer pipes.

Related References	
	-United States Department of Natural Resources Conservation Services Soil Map -Alabama Department of Agriculture -USEPA National Menu of BMPs -CWP Urban Forestry Manual



### JEFFERSON COUNTY SOIL MAP



SOURCE: United States Department of Natural Resources Conservation Services Soil Map website  
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

<b>Standard Operating Procedure for:</b>	
<b>B.5 Storage and Disposal of Fertilizer and Pesticides (Municipal Employees, Jefferson County Employees, and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly storing and disposing of fertilizers and pesticides (herbicides and fungicides). Because storm drain water is not part of a wastewater treatment system, discharge of these chemicals flows untreated into ponds, lakes, rivers, streams, estuaries, and bays.

**Always:**

- 1) Store fertilizers and pesticides in high, dry locations, according to manufacturer’s specifications and applicable regulations.
- 2) Fill out PHF storage form below.
- 3) Clearly label secondary containers.
- 4) Properly dispose of fertilizers and pesticides according to manufacturer’s specifications and applicable regulations.
- 5) Regularly inspect fertilizer and pesticide storage areas for leaks or spills.
- 6) Clean up spills and leaks of pesticides and fertilizers to prevent the chemicals from reaching the storm drain system. (SOPs B.12 and B.16)

**Whenever Possible:**

- 1) Store pesticides in enclosed areas or in covered impervious containment, preferably in a locked cabinet.
- 2) Order fertilizers and pesticides for delivery as close to time of use as possible to reduce amount stored at facility.
- 3) Order only the amount needed to minimize excess or obsolete materials requiring storage and disposal.
- 4) Use ALL herbicides or pesticides appropriately to minimize the amount of chemicals requiring disposal.
- 5) Do an annual review of storage area and dispose of old, unusable or “obsolete” fertilizer or pesticides in accordance with applicable regulations (just before your local Household Hazardous Waste Day).
- 6) Keep a eye out for local recycling centers that will be marked by a JCDH program that is targeted for October 2011.

EPA defines a pesticide as any substance intended for preventing, destroying, repelling, or mitigating any pest. Pest can include insects, animals, unwanted plants, fungi, bacteria, etc. The term applies to insecticides, herbicides, fungicides, etc.

**Never:**

- 1) Never dispose of fertilizers or pesticides in storm drains.
- 2) Never leave unlabeled or unstable chemicals in uncontrolled locations.

Related References	
	-USEPA National Menu of BMPs

# Storm Water Management Authority, Inc

1400 SIXTH AVENUE SOUTH. P.O. BOX 2648. BIRMINGHAM, ALABAMA 35202. (205)930-1230

## Pesticide, Herbicide, and Fertilizer Storage Facility

### Part 1: General Information

Stormwater Municipality: \_\_\_\_\_ Date: \_\_\_\_\_  
Mayor: \_\_\_\_\_  
Applicator's Department \_\_\_\_\_

### Part 2: Storage Information

Storage Location Address: \_\_\_\_\_ City: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Amount Stored \_\_\_\_\_ gallons  
Brand, Purpose, and Amounts of Chemicals Stored:

Are Storage SOPs followed: Yes No (if no why not)

Stormwater Municipality: \_\_\_\_\_  
 Mayor: \_\_\_\_\_

\*If more than 19 chemical stored then start at 1 on another form and continue forward until completed

### Pesticides, Herbicides and Fertilizer Inventory

Description	Purpose	Amount (gallons)	Category	Amount Used
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
15)				
16)				
17)				
18)				
19)				



<b>Standard Operating Procedure for:</b>	
<b>B.6 Fertilizing and Turf Health Application (Municipal Employees, Jefferson County Employees, and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly storing, applying, and disposing of fertilizers and by maintaining turf health to reduce diseases.

**Always:**

- 1) Store, use, and dispose of all fertilizers and contaminated wastes according to manufacturer's specifications and applicable regulations.
- 2) Choose seed based on soil types, intended use of area, latest variety research, and/or assessment of past site performance.
- 3) Check 5-day weather forecast to avoid fertilizing before heavy rain or during a drought.
- 4) Fill out appropriate form below.

**Whenever Possible:**

- 1) Apply fertilizers based on a soil testing program, soil type, turf function, and assessment by qualified personnel (conservation commission or municipal arborist, etc.). See Jefferson County Soil Map above.
- 2) Avoid fertilizing during a drought or when the soil is dry.
- 3) Apply fertilizers during periods of maximum plant uptake (usually fall and spring).
- 4) Avoid combined products such as weed and feed, which do not necessarily target specific problems at the appropriate time.
- 5) Calibrate application equipment to ensure proper application.
- 6) If phosphorus fertilizer is used when re-seeding, mix phosphorus into root- zone.
- 7) Use alternative or environmentally friendly products (See SOP B.15.).
- 8) Use natural compost and organic fertilizers instead of synthetic fertilizers.
- 9) Aerate grassed areas to improve drainage and bring more oxygen to the soil.

**Never:**

- 1) Never fertilize before a forecasted heavy rainfall.
- 2) Never apply phosphorus fertilizer on bare soil.
- 3) Never deposit fertilizer in the water, into storm drains, or onto impervious surfaces (streets and sidewalks).
- 4) Never apply fertilizer to frozen ground.
- 5) Never clean up spilled fertilizer by rinsing it with water.

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>	
<b>B.7 Weed and Pest Control Application (Municipal Employees, Jefferson County Employees, and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly applying pesticides (herbicides and insecticides).

**Always:**

- 1) Ensure that pesticides are only applied by personnel certified by AL Department of Agriculture to do so.
- 2) Apply pesticides according to manufacturer’s specifications, the Alabama Department of Agriculture & Industrial Food & Safety Division, Pesticide Management Section, and any local requirements.
- 3) Clean up any spilled chemicals (See SOPs B.12 and B.16.).
- 4) Use pesticides only when necessary.
- 5) Rinse equipment only when necessary and use rinse water to dilute next mix as long as application rates are not exceeded.

**Whenever Possible:**

- 1) Use alternative methods to control weeds and pests such as Integrated Pest Management strategies, biorational insecticides (natural soaps and oils) or biological controls. (See SOP B.15.)
- 2) Mix/load pesticides in an area where spills can be contained.
- 3) Pull weeds by hand or mechanically.
- 4) Spot treat affected areas only instead of entire location.
- 5) Apply pest control at the life stage when the pest is most vulnerable.
- 6) Choose the least toxic pesticides that still achieve results.
- 7) Tolerate low levels of weeds.
- 8) Allow grass to grow 2.5 to 3 inches high, reduce thatch build up and aerate soils.
- 9) Reduce seed release of weeds by timing cutting at seed set.

**Never:**

- 1) Never mix or prepare pesticides near storm drains.
- 2) Never apply controlled pesticides unless certified to do so.
- 3) Never apply pesticides before a heavy rainfall.
- 4) Never discharge rinse water or excess chemicals to storm drain, sewer, or ground surface.

Related References	
	-USEPA National Menu of BMPs

<p><b>Jefferson County Department of Health and Storm Water Management Authority</b> 1400 SIXTH AVENUE SOUTH. P.O. BOX 2648. BIRMINGHAM, ALABAMA 35202. (205)930-1230</p>	
<p><b>Pesticide, Herbicide, and Fertilizer Application (Municipal Use)</b></p>	
<p><b>FORM</b></p>	
<p><b>Part 1: General Information</b></p>	
Stormwater Municipality:	_____ Date: _____
Mayor:	_____
Applicator's Department	_____
Relevant Licenses Secured	Yes No License #: _____
<p><b>Part 2: Precipitation Amount</b></p>	
Time Since last rain (must be at least 24 hours)	_____ hrs
Precipitation Chance in 3-day period (estimated 3-day forecast information)	_____ % day 1
	_____ % day 2
	_____ % day 3
<p><b>Part 3: PHF Information</b></p>	
Estimated Amount Applied Total:	_____ gallons
Employee Hours Used in Application	_____ hrs
Types Commonly Applied:	
* Manufacture, Receipts of Purchase, and Purpose should be stated or stapled to document.	
Were SOPs followed during application: Yes No (if no why state below)	
Application Areas:	
<p>If PHFs are applied by an outside entity (Jefferson County, State of Alabama, etc..) then contract with outside entity should be stapled to this form when returned.</p>	

<p><b>Jefferson County Department of Health and Storm Water Management Authority</b>                  1400 SIXTH AVENUE SOUTH. P.O. BOX 2648. BIRMINGHAM, ALABAMA 35202. (205)930-1230</p>	
<p><b>Pesticide, Herbicide, and Fertilizer Application (Private Applicator)</b></p>	
<p><b>Application</b></p>	
<p><b>Part 1: General Information</b></p>	
Stormwater Municipality:	_____ Date: _____
Mayor:	_____
Applicant's Name	_____
Applicant's email address/ Phone number:	_____
Applicator Company Name:	_____
Mailing Address:	_____ City _____
State:	_____ Zip: _____
Relevant Licenses Secured	Yes No License #: _____
<p><b>Part 2: Precipitation Amount</b></p>	
Time Since last rain (must be at least 24 hours)	_____ hrs
3-day forecast information	_____ % day 1
	_____ % day 2
	_____ % day 3
<p><b>Part 3: PHF Information</b></p>	
Estimated Amount Applied Total:	_____ gallons
Employee Hours Used in Application:	_____ hrs
Type Applied:	_____
<p>Were SOPs followed during application: Yes No (if no why state below)</p>	
<p>Application Area:</p>	

<b>Standard Operating Procedure for:</b>	
<b>B.8 Mowing and Irrigation (Municipal Employees, Jefferson County Employees, and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by using proper mowing and watering techniques. Proper mowing and irrigation techniques will reduce organic matter and other pollutants from entering the storm drain system and waterbodies.

**Always:**

- 1) Mow only as low as needed for the area’s intended use.
- 2) Vary mowing pattern to minimize ruts and promote even growth.
- 3) Base irrigation amounts on monitoring for moisture content.
- 4) Water at appropriate times (when no rain is forecasted and in cooler times of day).
- 5) Manage leaves, clippings, and compost so that runoff does not enter storm drain system or waterbodies.

**Whenever Possible:**

- 1) Allow areas to go to meadow or field and mow once or twice per year rather than every week.
- 2) Keep mower blades sharpened to avoid damaging grass leaf tissue.
- 3) Mow when the grass is dry to prevent spread of turf diseases.
- 4) Sweep lawn clippings and debris instead of using water.
- 5) Mulch grass clippings using a mulching mower.
- 6) Fill gas tanks in a controlled location.

**Never:**

- 1) Never irrigate based on timers/schedules instead of monitoring for moisture content.
- 2) Never dump gas, wastes or contaminated water down storm drains.
- 3) Never refuel or change the mower oil near storm drains.
- 4) Never leave mower running in one location (to prevent burning and over- cutting of vegetation).

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>		
<b>B.9 Vehicle and Equipment Storage (Municipal and Jefferson County Employees)</b>		
<b>Purpose of SOP:</b>	To protect Storm Water from petroleum products that may drip or leak from vehicles and equipment being stored or from dirt and sediment that accumulate in the storage	

**Always:**

- 1) Inspect parking areas for stains/leaks on a regular basis.
- 2) Use drip pans or adsorbents for leaking vehicles (provide a labeled location to empty and store drip pans).
- 3) Address any known leaks or drips as soon as possible.
- 4) Clean up spills.

**Whenever Possible:**

- 1) Store vehicles inside where floor drains have been properly connected and registered.
- 2) Store vehicles on paved areas, and street sweep on a regular basis to remove drips/leaks/dirt, and dispose of street sweepings properly.
- 3) Maintain vehicles to prevent leaks.

**Never:**

- 1) Never store leaking vehicles over a storm drain.

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>	
<b>B.10 Vehicle and Equipment Washing (Municipal, JCDH, and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water using proper washing techniques, proper washing locations, and proper disposal of wash water for heavy and light-duty vehicles and equipment.

**Always:**

- 1) Operate a closed system with wastewater recycling (like a floor drain discharge to a holding tank), or
- 2) Discharge to a municipal sanitary sewer, or
- 3) Obtain a Septic Tank permit from JCDH, or
- 4) Wash fewer than 30 vehicles per week and discharge to the ground surface, if
  - Good Best Management Practices Rules are used,
  - The discharge is registered through NPDES permitting, and
  - The washwater:
    - a) is not from power washing, steam cleaning, engine cleaning, or undercarriage cleaning,
    - b) does not contain soaps or other products which contain regulated contaminants, and
    - c) does not discharge to a surface water.

**Whenever Possible:**

- 1) Use a commercial car wash for light duty vehicles.
- 2) Obtain and use drain guards (filter inserts) to catch sediments, petroleum products, etc. that might enter the storm drains as a result of vehicle washing.
- 3) Minimize water and soap use when washing or rinsing vehicles.

**Never:**

- 1) Never perform engine or undercarriage washing outside.
- 2) Never wash vehicles over a storm drain or near drinking water wells.
- 3) Discharge washwater to a surface water.

Related References	
	-Alabama Department of Environmental Management

<b>Standard Operating Procedure for:</b>	
<b>B.11 Vehicle and Equipment Fueling (Municipal, JCDH, and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To prevent Storm Water contamination originating from vehicle and equipment fueling.

**Always:**

- 1) Fuel carefully to minimize drips to the ground surface.
- 2) Maintain clean fuel dispensing areas using dry cleanup methods.
- 3) Clearly label and tag all valves to reduce human error.
- 4) Train employees and subcontractors on proper fueling methods and spill cleanup techniques.
- 5) Maintain fuel storage tanks in accordance with local, state and federal laws.
- 6) Have absorbent spill cleanup kits and materials available at fueling areas.
- 7) Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.
- 8) When fueling small equipment from portable containers, fuel in a designated area away from storm drains and waterbodies.

**Whenever Possible:**

- 1) Install a canopy or roof over aboveground storage tanks and fuel transfer areas.
- 2) Regularly inspect fueling equipment for corrosion and structural failure, cracks in foundations, and physical damage to container systems.
- 3) Use designated fueling areas built upon a level impervious surface (hard cement is best). If paved with asphalt, add a protective coating to create an impervious surface, inspect regularly, and street sweep quarterly at a minimum.
- 4) Protect storm drains from fueling areas using berms and dikes.
- 5) Use absorbent material or absorbent pads during fueling to collect leaks.

**Never:**

- 1) "Top off" fuel tanks (post signs to remind employees).
- 2) Hose down or bury a fuel spill.

Related References	
	-USEPA National Menu of BMPs



<b>Standard Operating Procedure for:</b>	
<b>B.12 Spill Cleanup (Municipal, JCDH, and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by educating employees on proper spill cleanup procedures, state reporting requirements and preventative actions.

**Always:**

- 1) Stop the source of the spill, if possible to safely do so.
- 2) Contain any liquids, if possible to safely do so.
- 3) Contact the appropriate emergency response number (see below) during normal working hours (8:00 a.m. – 4:00 p.m., Monday - Friday) to report spills.
  - **Jefferson County Emergency Management Agency– Oil and Response (205)254-2039**
  - **National Response Center – Chemical or Oil Spills that Impact Surface Water (800) 424-8802**
  - **USEPA Region 4 –(800)241-1754 or (404)562-9900**
- 4) Cover the spill with absorbent material such as kitty litter, sawdust, or oil absorbent pads. Do not use straw or water. (See SOP B.16 for adsorbent disposal.)
- 5) Petroleum spills involve, but are not limited to: crude oil, gasoline, heating oil, various fuel oils, lubricating oil, hydraulic oil, asphaltic residuals.
- 6) Report a petroleum spill if:
  - The spill is greater than 25 gallons, or
  - The spill cannot be immediately contained, or
  - The spill and/or contamination cannot be completely removed within 24 hours, or
  - There is an impact or potential impact to ground/surface water.
  - **IF IN DOUBT, REPORT THE SPILL**
- 7) Hazardous materials spills involve non-oil spills that pose a threat to human health or the environment, such as chemical releases.
- 8) Report any discharge of hazardous waste immediately, (within one hour) to local emergency officials [fire department], then contact the Jefferson County Emergency Management Agency as listed above
- 9) Contact local fire department \_\_\_\_\_(phone #).
- 10) Develop and maintain a Spill Prevention, Control, and Countermeasure (SPCC) Plan if the facility stores more than 1,320 gallons of petroleum.
- 11) Fit petroleum and chemical storage containers with secondary containment structures.
- 12) Keep a spill kit in areas where petroleum or hazardous materials are stored.
- 13) Train employees in spill response procedures and equipment annually.
- 14) Deploy containment booms if spill could potentially reach a storm drain or waterbody. JCDH is working with local fire departments to develop these maps which should be done by 2015
- 15) Position mats to contain drips from equipment or vehicles until they can be repaired.

**Whenever Possible:**

- 1) Seal the floor with paint to prevent absorption of fluids into concrete.
- 2) Install low-level or low-pressure alarms and/or cut-off systems on hydraulic equipment.

**Never:**

- 1) Never wash a spill into the storm drain or a water body.
- 2) Never leave a spill without cleaning it up.

<b>Standard Operating Procedure for:</b>	
<b>B.13 Parts Cleaning (Municipal and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by practicing proper parts cleaning techniques and disposing of waste cleaners properly.

**Always:**

- 1) Perform all cleaning in a designated area to minimize the potential for spills.
- 2) Store waste cleaners in properly labeled containers in accordance with regulations.
- 3) Dispose of all waste cleaners properly with a licensed contractor, on a regular basis.
- 4) Close parts-cleaner lid when it is not in use.

**Whenever Possible:**

- 1) The variety of cleaners should be minimized to make recycling and disposal simpler.
- 2) Use citrus-based cleaners and dispose of properly.
- 3) Use steam cleaning, pressure washing, or aqueous washers instead of solvents; however wastewater must be discharged to an oil/water separator and the wastewater treatment plant notified, or to a JCDH registered septic tank.

**Never:**

- 1) Never dispose of spent cleaners down the floor drains, sinks, storm drain, on the ground or into the air. Disposal by evaporation violates the Alabama Hazardous Waste Rules.
- 2) Never mix or add spent or fresh solvents to used oil.
- 3) Never use gasoline as a cleaner or solvent.
- 4) Never burn spent parts cleaning fluids in a used oil burner.
- 5) Never use a hand-held cleaner in/near the parts cleaner; never mix cleaners.

<b>Standard Operating Procedure for:</b>		
<b>B.14 Spare Parts Storage</b>		
<b>Purpose of SOP:</b>	To protect Storm Water by properly storing spare parts. Improper storage of materials can result in pollutants and toxic materials entering ground and surface water supplies.	

**Always:**

- 1) Store spare parts in a designated area.
- 2) Use drip pans for any parts that are dripping.

**Whenever Possible:**

- 1) Store spare parts inside or under cover.
- 2) Monitor storage areas for staining/leaks on a schedule decided on by the appropriate personnel.
- 3) Clean the majority of petroleum products from the parts that are to be stored.

<b>Related References</b>	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>	
<b>B.15 Alternative Products Use/Storage/Disposal (All Organizations)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by using alternative products that are more environmentally friendly.

**Always:**

- 1) Ask product suppliers, peers, or regulatory agents if there is a more environmentally friendly alternative, when ordering any product.

**Whenever Possible:**

- 2) Use alternative products when deemed appropriate:
  - Instead of solvent-based parts cleaners use citrus-based cleaners or steam/pressure wash to an oil/water separator/holding tank.
  - Instead of herbicides use bark mulch.
  - Instead of fertilizer use compost or manure.
  - Instead of pesticides plant marigolds, onion, or garlic as deterrents; release or attract beneficial insects.
  - Instead of synthetic adsorbents, use corncob or cellulose products for petroleum spills that can be burned for energy recovery.
- 3) Train employees annually on the benefits of using alternative products.
- 4) Minimize waste by purchasing recyclable products that have minimal packaging.
- 5) Use less harmful deicers such as calcium magnesium acetate, potassium acetate, or organic deicers such as Magic Salt™.
- 6) Use a "pre-mix" of 4 to 1 sodium chloride and calcium chloride, which is the most cost- effective alternative to straight salt.
- 7) Substitute synthetic fertilizers with natural compost and organic fertilizers to improve soil pH, texture and fertility, and cause less leaching to groundwater.
  - Use no-phosphorus lawn fertilizer.
  - Use natural or certified organic fertilizers with low phosphorus levels (8-2-4, 6-2-4, 9-1-1, 6-1-1).
- 8) Use slow-release nitrogen fertilizers.
- 9) Reduce or eliminate mown lawn in areas that are not actively used.
- 10) Consider converting unused turf to meadow or forest.

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>	
<b>B.16 Petroleum and Chemical Disposal (Municipal and Jefferson County Employees, Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water from petroleum and chemical products due to improper disposal practices.

**Always:**

- 1) Maintain tracking and manifest to report to JCDH or Storm Water Management Authority, Inc, where necessary, of chemicals and petroleum products being disposed or recycled off-site.
- 2) Transports used petroleum and chemical products with a licensed transporter and maintain records for three years.
- 3) Train employees annually on proper disposal practices.
- 4) Drain used oil filters for 24-hours before crushing and disposal (disposal in regular trash allowed).
- 5) Analyze floor drain solids (from sediment trap) for TCLP to determine if hazardous waste or not.
- 6) Contaminated cloth wipe may be laundered onsite or offsite, liquid free, and stored in a closed, labeled container.

**Whenever Possible:**

- 1) Minimize the number of solvents used to reduce the variety of waste generated and to make recycling easier.
- 2) Use safer alternatives. (see Alternative Products SOP)
- 3) If burning used oil for on-site heat, analyze for these used oil standards (Arsenic, Lead, Cadmium, Chromium, F- listed Halogens, Flashpoint, PCBs) approximately once every 1,000 gallons.

**Never:**

- 1) Never place hazardous waste in solid waste dumpsters.
- 2) Never pour liquid waste down floor drains, sinks or outdoor storm drain inlets.
- 3) Never mix petroleum waste and chemical waste.
- 4) Never dispose of any gasoline-contaminated waste in the regular trash. Dispose of it only as a hazardous waste.

<b>Standard Operating Procedure for:</b>	
<b>B.17 Petroleum and Chemical Handling (Municipal and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly managing petroleum products and chemicals used by municipalities.

**Always:**

- 1) Train employees in hazardous material handling, safety, spill cleanup and reporting on an annual basis.
- 2) Handle petroleum products and chemicals according to manufacturer’s specifications.
- 3) Conduct oil changes indoors for equipment that fits indoors.
- 4) Use proper protective equipment.
- 5) Maintain Material Safety Data Sheets (MSDS) for all chemicals used.
- 6) Make MSDS sheets available on materials that require special handling, storage and/or disposal.
- 7) Create a sign-off sheet for employees stating that they know the location of the MSDS(s) and provide to JCDH or Storm Water Management Authority, Inc.
- 8) Train new employees within six months of hire. A record of this should be kept and given annually to JCDH or Storm Water Management Authority, Inc

**Whenever Possible:**

- 1) Assess hazardous material needs to minimize the amount and variety of hazardous material in storage.
- 2) Keep an inventory of hazardous materials on hand.
- 3) Transfer materials from one container to another indoors in a well ventilated area.
- 4) Properly label containers.

**Never:**

- 1) Never treat or dispose of hazardous materials unless licensed to do so.
- 2) Never mix petroleum or chemicals unless directed by manufacturer’s instructions.

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>	
<b>B.18 Petroleum and Chemical Storage – Bulk (Municipal and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly storing bulk petroleum products and chemicals (containers larger than 55 gallons).

**Always:**

- 1) Store materials away from high traffic areas, posted with appropriate signage.
- 2) Store materials according to manufacturer's specifications in approved containers and conditions.
- 3) Be prepared for possible spills by having a spill kit nearby.
- 4) Register ASTs if your facility stores more than 660 gallons of petroleum products (10,000 gallons if used for on-site heating).
- 5) Develop and use a Spill Prevention Control and Countermeasure (SPCC) plan if storing more than 1,320 gallons of petroleum (required).
- 6) Store incompatible hazardous materials in separate areas.
- 7) Inspect storage areas for leaks or drips frequently.
- 8) Store bulk items within secondary containment areas if bulk items are stored outside.
- 9) Conduct annual employee training to reinforce proper storage techniques for petroleum and chemical products. Keep record and present to JCDH or Storm Water Management Authority, Inc annually.

**Whenever Possible:**

- 1) Store bulk chemicals and petroleum products inside or under cover.
- 2) Provide secondary containment for interior storage.
- 3) Cover transfer areas.

**Never:**

- 1) Never store bulk chemicals or petroleum products near a storm drain.



<b>Standard Operating Procedure for:</b>	
<b>B.19 Petroleum and Chemical Storage – Small Quantity (All organizations and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water from pollution by properly storing petroleum products or chemicals (containers 55 gallons and smaller).

**Always:**

- 1) Store materials away from high traffic areas.
- 2) Store materials according to manufacturer's specifications (e.g. in a flammable materials storage cabinet).
- 3) Dispose of unused or waste materials properly.
- 4) Train employees on proper storage procedures for petroleum and chemical products.
- 5) Store materials in their original containers to maintain appropriate labeling.
- 6) Be prepared for spills by having a spill kit nearby.
- 7) Frequently inspect the storage areas for leaks or spills.
- 8) Conduct annual employee training to reinforce proper storage techniques for petroleum and chemical products. A list should be provided to JCDH or Storm Water Management Authority, Inc at the end of the permit cycle.

**Never:**

- 1) Never store petroleum or chemical products near a floor drain or Storm Water inlet.

<b>Standard Operating Procedure for:</b>	
<b>B.20 Garbage Storage (All Organizations and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water from contamination by properly storing garbage. Garbage and leachate can be transported by Storm Water and enter the storm drain system and receiving waterbodies.

**Always:**

- 1) Cover rubbish bins to keep rubbish and leachate in and wind and rain out.

**Whenever Possible:**

- 1) Store garbage containers beneath a covered structure or inside to prevent contact with Storm Water. This is done on all food establishments as well by JCDH.
- 2) Install berms, curbing or vegetation strips around storage areas to control water entering/leaving storage areas.
- 3) Locate dumpsters on a flat, concrete surface that does not slope or drain directly into the storm drain system.
- 4) Locate dumpsters and trash cans in convenient, easily observable areas.
- 5) Provide properly-labeled recycling bins to reduce the amount of garbage disposed.
- 6) Inspect garbage bins for leaks regularly, and have repairs made immediately by responsible party.
- 7) Keep bins free of improperly discarded trash.
- 8) Provide training to employees to prevent improper disposal of general trash.
- 9) Minimize waste by purchasing recyclable products that have minimal packaging.
- 10) Request/use dumpsters without drain holes.

**Never:**

- 1) Never place hazardous wastes in a dumpster or trash bin.
- 2) Never place gasoline-contaminated wastes in a rubbish bin (but small quantities of adsorbents from virgin oil spills are acceptable).
- 3) Never place oil-contaminated materials that release free draining oil into a rubbish bin.

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>	
<b>B.21 General Facility Housekeeping (All Organizations)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by maintaining a clean, organized facility.

**Always:**

- 1) Keep open areas clean and orderly.
- 2) Pick up litter.
- 3) Conduct regular employee training and public education to reinforce proper housekeeping. Keep internal records to provide to Storm Water Management Authority, Inc or JCDH.
- 4) Remove unused scrap/junk materials.
- 5) Store hazardous materials as specified by the manufacturer.

**Whenever Possible:**

- 1) Store materials and wastes inside or under cover if outside.
- 2) Substitute less or non-toxic materials for toxic ones.
- 3) Perform a routine cleaning of the facility.
- 4) Inspect facility (interiors, exterior, parking areas, etc.) for stains.

Related References	
	-USEPA National Menu of BMPs

<b>Standard Operating Procedure for:</b>		
<b>B.22 Floor Drains (Municipal and Jefferson County Employees)</b>		
<b>Purpose of SOP:</b>	To protect Storm Water from pollution caused by discharges of hazardous materials to the subsurface, ground surface, waterway, or storm sewer through floor drains.	

**Always:**

- 1) Keep a spill kit in the vicinity of the floor drains.
- 2) Obtain and use drain mats, adsorbent booms or covers to keep larger spills out of drains.
- 3) Use floor drains that are (1) connected to a holding tank or (2) connected to the sanitary sewer via an oil/water separator.
- 4) Keep internal map of floor drains that have regulated contaminants stored or used near them.
- 5) Register septic tanks with JCDH.

**Whenever Possible:**

- 1) Minimize water use or run a dry shop.

**Never:**

- 1) Never dump hazardous materials down the floor drains.
- 2) Never use floor drains if you are unsure of their discharge location.
- 3) Never store regulated contaminants near a floor drain that discharges directly to the environment.

<b>Standard Operating Procedure for:</b>	
<b>B.23 Painting (All Organizations and Homeowners)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly storing, using and disposing of paint and preparation materials.

**Always:**

- 1) Store waste paints, solvent, and rags in sealed containers.
- 2) Perform abrasive blasting and spray painting in accordance with regulations.
- 3) Properly clean, store, and dispose of paint and associated waste materials.
- 4) Train employees on Best management Practices concerning painting activities, cleanup, and disposal.

**Whenever Possible:**

- 1) Replace solvent-based paint with less toxic paints such as latex or water-based paints.
- 2) Practice "source reduction" – buy only the paint that is needed.
- 3) Use up, donate or recycle unused paint.
- 4) Use drop cloths under any painting or preparation activity such as scraping or sandblasting.
- 5) Use techniques such as brushing and rolling to avoid overspray.
- 6) Use vacuum sanders to collect paint dust.
- 7) Perform abrasive blasting and spray painting in an enclosed or covered area that is safe for personnel.

**Never:**

- 1) Never dispose of paint or waste paint products into the storm drain system, a waterbody, or onto the ground.

<b>Standard Operating Procedure for:</b>	
<b>B.24 Street Sweeping</b>	
<b>Purpose of SOP:</b>	To remove sediment, debris and other pollutants from streets, parking areas, and paved surfaces through regular, properly timed sweeping schedules.

**Always:**

- 1) Sweep all publicly accepted paved streets and parking lots at least once per year as soon as possible after snowmelt.
- 2) Dispose of street sweepings properly (reuse is unrestricted if visual evidence of litter, animal waste, and petroleum contamination is absent).
- 3) Keep data logs on the mileage of street sweeping conducted in each city to provide to Storm Water Management Authority, Inc or JCDH such as the form below.

**Whenever Possible:**

- 1) Start at the “top” of town and work down.
- 2) Sweep downtown areas more frequently (daily).
- 3) Perform additional sweeping on a seasonal schedule and document areas swept.
- 4) Sweep in locations that generate debris, such as construction entrances, sand/salt loading areas, vehicle fueling areas, and vehicle and equipment storage areas on an as needed basis.
- 5) Street sweep before a major rain event.
- 6) Use dry vacuum assisted street sweepers (the most effective).
- 7) Maintain street sweeping equipment for maximum effectiveness.
- 8) Cover storage areas or locate storage areas where runoff discharges to a buffer.
- 9) Clean catch basins after streets are swept.

**Never:**

- 1) Never store street sweepings in areas where Storm Water could transport fines to the storm drain system or a waterbody.
- 2) Never purposely sweep into the storm drain system.

<b>Standard Operating Procedure for:</b>	
<b>B.25 Snow Disposal (Municipal and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by minimizing the impact of snow piles which contain sand, salt, and trash and which generate concentrated releases of pollutants during spring snowmelt conditions.

**Always:**

- 1) Identify sensitive ecosystems prior to disposal and avoid snow disposal in these areas.
- 2) Store snow at least 25 feet from the high water mark of a surface water.
- 3) Store snow at least 75 feet from any private water supply, at least 200 feet from any community water supply, and at least 400 feet from any municipal wells.
- 4) Install a double row of silt fence or equivalent barrier securely between the snow storage area and the high water mark, and inspect periodically throughout the winter season.
- 5) Clear debris in storage area each year prior to snow storage use.
- 6) Clear all debris in snow storage area and properly dispose of no later than April 15 or immediately after snowmelt occurs of each year the storage area is in use.

**Whenever Possible:**

- 1) Select storage locations that do not drain into surface waters and where environmental impacts of spring melt are minimal.
- 2) Store snow on areas that are well above the groundwater table on a flat, vegetated slope.
- 3) Avoid disposal on pavement, concrete, and other impervious surfaces.
- 4) Do not pile snow in wooded areas, around trees or in vegetative buffers.
- 5) Divert run-on of water from areas outside the snow piles.
- 6) Use less harmful deicers such as calcium magnesium acetate, potassium acetate, or organic deicers such as Magic Salt™.

**Never:**

- 1) Never dispose of snow in wetlands, lakes, streams, rivers, or near drinking water sources.
- 2) Never store snow in well-head protection areas (class GAA groundwater).

<b>Standard Operating Procedure for:</b>	
<b>B.26 Deicing Material Storage (Municipal and Jefferson County Employees)</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by properly storing deicing materials. Sand, salt and other deicing materials used during winter can be transported by runoff into the storm drain system and eventually into waterbodies if not stored properly.

**Always:**

- 1) Locate sand/salt piles and deicing fluid tanks on flat, impervious sites that are easily protected from overland runoff and away from surface waters.
- 2) Cover sand/salt and salt piles with a tarp (polyethylene) during non-freezing spring and summer months when indoor storage facilities are not available.
- 3) Fill out form below on amounts and facility location

**Whenever Possible:**

- 1) Contain wash water from trucks used for salting and sanding in a holding tank for disposal or discharge into sanitary sewers.
- 2) Allow rinse water/melt water to drain into vegetated buffers (away from storm drains).
- 3) Locate deicing material stockpiles and tanks at least 100 feet from streams and flood plains.
- 4) Contain Storm Water runoff from areas where salt is stored by using buffers to diffuse runoff before entering waterbodies.
- 5) Use diversion berms to minimize run-on to storage areas.
- 6) Cleanup "truck tracks" after storm events.

**Never:**

- 1) Never dispose of wash water from sanding and salting trucks into the storm drain system, a waterbody, or septic system drain fields.



Stormwater Municipality:	_____		
Mayor:	_____		
<b>Sand or Deicing Storage Location (Municipal use)</b>			
Storage Location Address:	_____	City: _____	State: _____
Amount Stored	_____	yd <sup>3</sup>	
Are SOPs followed	Yes	No (if no please explain below)	

Stormwater Municipality: \_\_\_\_\_

Mayor: \_\_\_\_\_

\*If more than 197 roadway projects then start at 1 on another form and continue forward until completed

<b>Roadway Projects Inventory</b>			
Location	Project Description	Was planned reviewed by JCDH, STORM WATER, or municipality	Permit Number
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

\* Please staple all permits, inspections, and plan review dates to form for annual report

<b>Standard Operating Procedure for:</b>	
<b>B.27 Deicing Material Application</b>	
<b>Purpose of SOP:</b>	To protect Storm Water by improving application techniques of salt, sand, and other deicing materials.

**Always:**

- 1) Apply as little sand and salt as needed, and no more than the NHDOT recommended application rates (based on level of service):

Condition	Highways carrying greater than 5,000	Highway/roads carrying less than 5,000 vehicles daily
Snow - 20°F and	250 lbs salt	250 lbs salt per lane mile
Snow – below 20° F	250 lbs salt	Abrasive chemical mix
Sleet/freezing rain	300 lbs salt	300 lbs salt per lane mile

**Whenever Possible:**

- 1) Inform salt applicators of sensitive areas, such as public water supplies, lakes, ponds, etc b installing permanent signs.
- 2) Use de-icing alternatives such as calcium magnesium acetate, sand, etc. in sensitive areas.
- 3) Use the minimum amount of salt and sand needed to get the job done.
- 4) Use coarse, clean “washed” sand, which is free of fine particles and dust and easier to clean in the spring.
- 5) Equip all spreaders with ground-speed controllers.
- 6) Train drivers to improve application techniques and reduce losses.
- 7) Consider applying salt in a 4-8 foot strip along centerline of a two-lane road (for less traveled roads).
- 8) Know when to plow and reapply salt. Allow maximum melting by salt before plowing.
- 9) Remove snow manually from driveways and sidewalks.
- 10) Street sweep accumulated salt and sand at the end of the season.

<p><b>Jefferson County Department of Health and Storm Water Management Authority</b></p> <p>1400 SIXTH AVENUE SOUTH. P.O. BOX 2648. BIRMINGHAM, ALABAMA 35202. (205)930-1230</p>	
<p><b>Roadway Form (Municipal Use)</b></p>	
<p><b>FORM</b></p>	
<p><b>Part 1: General Information</b></p> <p>Stormwater Municipality: _____ Date: _____</p> <p>Mayor: _____</p> <p>Contact Person: _____</p>	
<p><b>Part 2: Trash Collection</b></p> <p>Estimated Trash Collected in Permit Year: _____ lbs</p> <p>Estimated Employee Hours collecting trash: _____ hrs</p> <p>Disposal Method for Trash: _____</p> <p><small>(*What landfill was used for disposal, dump tickets should be included if present)</small></p>	
<p><b>Part 3: Street Sweeping</b></p> <p>Street Sweeping for Permit Year: _____ miles</p> <p>Street Refuse Reused: _____ lbs</p> <p>Street Refuse Disposal: _____ lbs</p> <p>Employee hours spent disposing of refuse: _____ hrs</p> <p>Disposal Method: _____</p> <p><small>(*What landfill was used for disposal, dump tickets should be included if present)</small></p>	
<p><b>Part 4: Sand or Deicing Material</b></p> <p>Sand or Salt used for Permit Year: _____ yd<sup>3</sup></p> <p>Sand or Salt disposal for Permit Year: _____ yd<sup>3</sup></p> <p>Estimated Employee Hours disposing of material: _____ hrs</p>	

Disposal Method for Sand or Salt: (*What landfill was used for disposal, dump tickets should be included if present)
**Sand Storage Form should be filled out with location of sand storage
If roadway functions are performed by an outside entity (Jefferson County, State of Alabama, etc..) then contract with outside entity should be stabled to this form when returned.

## **APPENDIX B**

### Storm Water Collection Systems Operations

# Structural Controls Inspection

## General Information

Facility Name:	Facility's ID:
Facility Address:	Inspection Date:

## Inspector's Information

Name:	Organization:
Phone #:	Fax #:
Email:	

## Inspection Type (Circle one)

Semi-Annual	Storm Event	Follow-up	Assessment
-------------	-------------	-----------	------------

## Structure Type (Circle one)

Retention Pond (wet)	Detention Pond (dry)	Underground Detention	Other:
----------------------	----------------------	-----------------------	--------

## Observations

Y	N	N/A	Floatables present?	Y	N	N/A	Illegal dumping?
Y	N	N/A	Litter present?	Y	N	N/A	Public hazards?
Y	N	N/A	Sediment accumulation?	Y	N	N/A	Outlet structure clogged?
Y	N	N/A	Debris accumulation?	Y	N	N/A	Outlet structure damaged?
Y	N	N/A	Illegal discharges?	Y	N	N/A	Poor ground cover?

Comments:

Y	N	N/A	Maintenance required?
---	---	-----	-----------------------

## Maintenance Required (Put a check beside work needed)

	Remove floatables		Remove illegal dumping
	Remove litter		Remove public hazards
	Remove sediment		Unclog outlet structure
	Remove debris		Repair outlet structure
	Remove illegal discharges		Repair ground cover

Comments:

Signature:

***Please Remember to Document Totals Removed As Well as the Units  
(Example: 6.5 cubic feet of sediment removed)***

# Structural Controls Maintenance Summary

## General Information

Facility Name:	Facility ID:
Crew Leader:	Organization:
Man hours:	Maintenance date:

## Maintenance

Actions			Amount Removed	Units (bags, cubic foot, etc.)
Y	N	N/A	Remove floatables?	
Y	N	N/A	Remove litter?	
Y	N	N/A	Remove sediment?	
Y	N	N/A	Remove debris?	
Y	N	N/A	Remove illegal discharges?	
Y	N	N/A	Remove illegal dumping?	
Y	N	N/A	Remove public hazards?	
Y	N	N/A	Unclog outlet structure?	
Y	N	N/A	Repair outlet structure	
Y	N	N/A	Repair ground cover?	

Comments:

Signature:



<b>Standard Operating Procedure for:</b>	
<b>Structural Control Inspection</b>	
<b>Purpose of SOP:</b>	To inspect and maintain structural controls of MS4
<b>ADEM Permit Reference:</b>	Part II.B.1.a.ii.3
<b>Effective Date:</b>	March 2017

### Personnel Qualifications

1. Knowledge of the types of structural components associated with storm water management facilities; and,
2. Initial training in the information and data to be collected during an inspection.

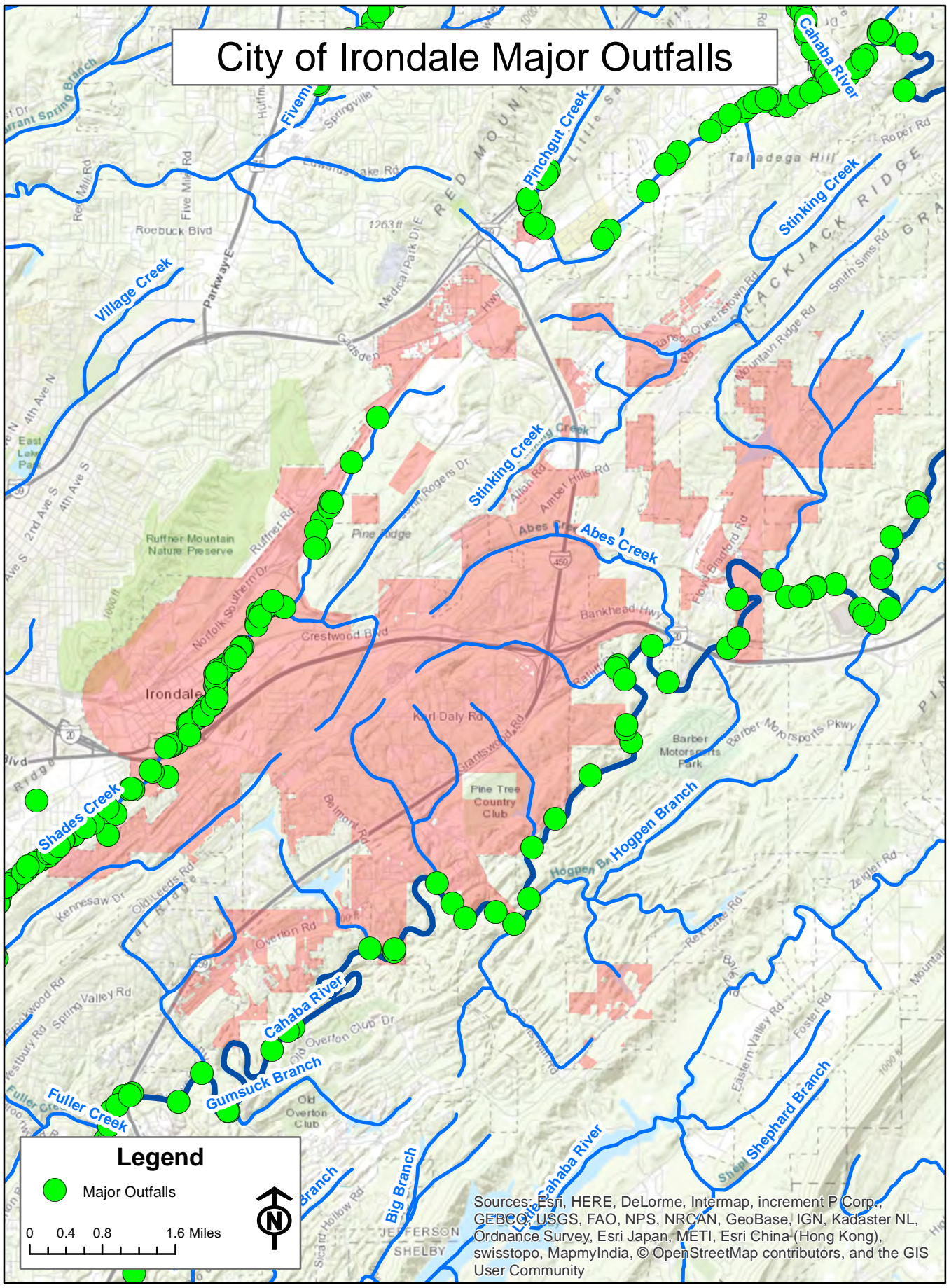
### Procedural Steps

1. Obtain the necessary equipment and materials needed to perform the inspection. Equipment and materials shall include the following.
  - a. Updated inventory of structural controls
  - b. Structural Controls Quarterly Inspection Form or mobile app; and
  - c. Camera
2. Facility Information
  - a. Verify name, facility ID, location and watershed of structural controls
  - b. Select inspection type
  - c. Select weather conditions
  - d. Select land use
  - e. Identify structure type
  - f. Identify outlet type
  - g. Confirm that it is a structural control
3. Inspection observations
  - a. Walk the perimeter of the structural control and inspect for the items listed;
  - b. Provide comments as necessary to describe observations; and,
  - c. Take pictures to document existing conditions of the structural control.
4. Follow-up actions
  - a. Identify if follow-up actions or maintenance activities are required at the structural control;
  - b. Check the items that require follow-up actions; and,
  - c. Provide comments as necessary to describe the follow-up actions and/or maintenance required.
5. Inspector information
  - a. Complete all items; and,
  - b. Identify if photographs were taken as part of the inspection and attached to the report.
6. Finalize Structural Controls Inspection Form and include applicable photographs
7. Submit the inspection report on the mobile app to the GIS department. The GIS department will provide reports from this data.

## **APPENDIX C**

### Illicit Discharge Detection and Elimination (IDDE)

# City of Irondale Major Outfalls



**Legend**

- Major Outfalls

0 0.4 0.8 1.6 Miles

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Irondale Major Outfalls

<b>Waterbody</b>	<b>Longitude</b>	<b>Latitude</b>
Cahaba River	-86.66729072	33.504728
Cahaba River	-86.66723257	33.50522541
Cahaba River	-86.66050879	33.51371562
Cahaba River	-86.65113786	33.51014972
Cahaba River	-86.64826135	33.50856408
Cahaba River	-86.63052343	33.53435408
Cahaba River	-86.61283637	33.55160623
Cahaba River	-86.61252722	33.54624066
Shades Creek	-86.71274679	33.52003284
Shades Creek	-86.70902553	33.52643468
Shades Creek	-86.70868051	33.52614797
Shades Creek	-86.70597012	33.52862736
Shades Creek	-86.70563501	33.52841639
Shades Creek	-86.70345616	33.53183938
Shades Creek	-86.70333669	33.52806307
Shades Creek	-86.70281191	33.53195257
Shades Creek	-86.70269561	33.53205025
Shades Creek	-86.70266899	33.53205635
Shades Creek	-86.70177356	33.53246618
Shades Creek	-86.7000867	33.53489779
Shades Creek	-86.70005685	33.53391133
Shades Creek	-86.70000259	33.53490584
Shades Creek	-86.69992694	33.53362965
Shades Creek	-86.6998706	33.53504456
Shades Creek	-86.69986164	33.5351467
Shades Creek	-86.69985957	33.53512373
Shades Creek	-86.69983347	33.53512646
Shades Creek	-86.69981033	33.5335954
Shades Creek	-86.69870219	33.53564811
Shades Creek	-86.6986266	33.535689
Shades Creek	-86.6978879	33.53604035
Shades Creek	-86.6977798	33.5360224
Shades Creek	-86.69762766	33.53664542
Shades Creek	-86.69755419	33.53617752
Shades Creek	-86.6971618	33.5370788
Shades Creek	-86.69707384	33.53700013
Shades Creek	-86.69664427	33.53727043
Shades Creek	-86.69616649	33.53750652
Shades Creek	-86.69616535	33.53756136
Shades Creek	-86.69592006	33.53776392
Shades Creek	-86.69582271	33.5379961
Shades Creek	-86.69572429	33.53805429
Shades Creek	-86.69571598	33.54160483
Shades Creek	-86.69571275	33.53980417
Shades Creek	-86.69560011	33.54068472
Shades Creek	-86.69559644	33.54036991

Irondale Major Outfalls

<b>Waterbody</b>	<b>Longitude</b>	<b>Latitude</b>
Shades Creek	-86.69555619	33.54096398
Shades Creek	-86.69552013	33.54177682
Shades Creek	-86.69551001	33.53971665
Shades Creek	-86.69550529	33.53990985
Shades Creek	-86.69545008	33.53894407
Shades Creek	-86.6954492	33.54171638
Shades Creek	-86.69542678	33.53840335
Shades Creek	-86.69521634	33.54196747
Shades Creek	-86.69501849	33.54209953
Shades Creek	-86.69490078	33.54208775
Shades Creek	-86.69479934	33.54208339
Shades Creek	-86.69437966	33.542489
Shades Creek	-86.69393288	33.54274089
Shades Creek	-86.69389913	33.54277489
Shades Creek	-86.69289294	33.54324825
Shades Creek	-86.69263902	33.54375539
Shades Creek	-86.69243935	33.54369877
Shades Creek	-86.69160274	33.54485732
Shades Creek	-86.69140581	33.54517355
Shades Creek	-86.69138319	33.54509741
Shades Creek	-86.68919507	33.54792777
Shades Creek	-86.68915804	33.54847948
Shades Creek	-86.68898817	33.54948247
Shades Creek	-86.68886888	33.54951562
Shades Creek	-86.68852877	33.54918953
Shades Creek	-86.68849236	33.54926058
Shades Creek	-86.68778874	33.55016811
Shades Creek	-86.68727361	33.55057747
Shades Creek	-86.68724151	33.55065904
Shades Creek	-86.68652644	33.55123473
Shades Creek	-86.68534184	33.5505805
Shades Creek	-86.6846818	33.55044887
Shades Creek	-86.6796777	33.56037071
Shades Creek	-86.67874337	33.56191752
Shades Creek	-86.67761041	33.56362527
Shades Creek	-86.6773592	33.5642618
Shades Creek	-86.67713774	33.56438776
Shades Creek	-86.67403931	33.56955945
Shades Creek	-86.66986895	33.57545153

## DRY SCREENING FIELD DATA SHEET

FIELD SITE DESCRIPTION			
MUNICIPALITY:		LOCATION:	
PRIMARY LOCAL LAND USES:		OUTFALL DESCRIPTION:	
COMMENTS:			
WEATHER (CIRCLE APPLICABLE)			
WEATHER CONDITIONS: CLEAR      CLOUDY      WINDY      CALM      RAINY      DRY			
COMMENTS:			
RAIN INFORMATION			
TIME SINCE LAST RAINFALL (HOURS):			
COMMENTS:			
VISUAL OBSERVATIONS (CIRCLE APPLICABLE)			
ODOR PRESENT: NONE      MUSTY      SEWAGE      ROTTEN EGGS      SOUR MILK      OTHER _____			
TYPE OF FLOATABLES: NONE VISIBLE      NATURAL DEBRIS      PLASTICS      PAPER      OTHER _____			
COLOR: CLEAR      RED      GREEN      YELLOW      BLUE      BROWN      GREY      OTHER _____			
% CLARITY: 0%      25%      50%      75%      100%			
DEPOSITS: SILT      VEGETATION      OTHER _____			
VEGETATION CONDITION: NONE      NORMAL      EXCESSIVE GROWTH      INHIBITED GROWTH			
BIOLOGICAL:      NORMAL      MOSQUITO LARVAE      BACTERIA      ALGAE      OTHER _____			
COMMENTS:			
OUTFALL DESCRIPTION			
RIVER SIDE:      DOWNSTREAM LEFT      DOWNSTREAM RIGHT      IN THE CREEK			
DIMENSIONS IF PIPE: VERTICAL DIAMETER _____ HORIZONTAL DIAMETER _____ UNITS _____			
DIMENSIONS IF OPEN CHANNEL: TOP WIDTH _____ BOTTOM WIDTH _____ DEPTH _____ UNITS _____			
CONDITION: NORMAL      NEEDS REPAIR      NEEDS CLEANOUT			
NUMBER OF OUTFALLS: _____			
MATERIAL: EARTHEN      CONCRETE      CORRUGATED METAL      HDPE      OTHER _____			
SHAPE: BOX      CIRCULAR      ELIPTICAL      ARCH      TRAPAZOIDAL			
FLOW ESTIMATION			
FLOW PRESENT: YES      NO			
A) WATER SURFACE WIDTH: _____ FEET		B) DEPTH OF WATER: _____ FEET	
C) VELOCITY: _____ FT/ SEC		ESTIMATED FLOW RATE (=A*B*C): _____ FT <sup>3</sup> / SEC	
WATER QUALITY DATA (IF FLOWING)			
PH _____ (S.U.)		WATER TEMPERATURE _____ (C°)	
DISSOLVED OXYGEN _____ (MG/L)		SPECIFIC CONDUCTANCE _____ (μS/ CM)	
CHLORINE _____ (MG/L)		AMMONIA _____ (MG/L)	
TURBIDITY _____ (NTU)			
COMMENTS:			
<b>I HEREBY CERTIFY THAT ALL INFORMATION ON THIS SHEET IS ACCURATE TO THE BEST OF MY KNOWLEDGE.</b>			
INSPECTOR #1 (PRINT)		INSPECTOR #2 (PRINT)	
INSPECTOR #1 (SIGNATURE)		INSPECTOR #2 (SIGNATURE)	
DATE:		DATE:	
TIME:		TIME:	

Standard Operating Procedure for:		
<b>IDDE: Notification of Alabama Department of Environmental Management</b>		
<b>Purpose of SOP:</b>	To notify Alabama Department of Environmental Management (ADEM) of a suspect illicit discharge entering the Permittee's MS4 from an adjacent MS4	

**Always:**

- 1) If source of illicit discharge is not the permittee but an adjacent MS4 contact the following parties:
  - 1) The adjacent MS4 permit
  - 2) ADEM

**Whenever Possible:**

- 1) Turn over any water quality analysis data and notes.

## **APPENDIX D**

### Construction Site Storm Water Runoff Control



Project Name: \_\_\_\_\_ File Number \_\_\_\_\_

Inspection Date: \_\_\_\_\_ Time \_\_\_\_\_ Inspector's Name \_\_\_\_\_

<b>Stage of Construction (Circle one)</b>					
Pre-Construction Conference		Clearing and Grubbing		Rough Grading	
Building Construction		Finish Grading		Final Stabilization	
<b>Erosion Prevention</b>					
Y	N	N/A	Have all disturbed areas requiring temporary or permanent stabilization been adequately stabilized by an appropriate BMP (erosion control blankets, aggregate, seed, mulch, etc.)?		
Y	N	N/A	Are soil stock piles adequately stabilized with seeding and/or proper sediment control measures?		
Y	N	N/A	Are utility trenches properly stabilized?		
Y	N	N/A	Are perimeter sediment control measures correctly installed, maintained and effective (silt fence, etc.)?		
Y	N	N/A	Are finished cut and fill slopes adequately stabilized?		
Y	N	N/A	Are storm water conveyance channels adequately stabilized with channel lining?		
<b>Sediment Control</b>					
Y	N	N/A	Have sediment control BMP's been constructed as a first step in land disturbing activities (basins, etc.)?		
Y	N	N/A	Are sediment control BMP's installed where needed?		
Y	N	N/A	Have all sediment control BMP's been repaired and sediment removal been performed?		
Y	N	N/A	Do all operational storm sewer inlets have adequate inlet protection?		
<b>In-stream Construction</b>					
Y	N	N/A	Is the in-stream construction permitted? (Check to see if U.S.A.C.E permit is needed)		
Y	N	N/A	Are current construction practices minimizing channel damage?		
Y	N	N/A	Are temporary stream crossings of non-erodible material installed where applicable?		
Y	N	N/A	Is necessary re-stabilization of in-stream construction complete?		
<b>General Groundskeeping</b>					
Y	N	N/A	Are soil and mud kept off public roadways at intersections with access roads (entrance BMPs)?		
Y	N	N/A	Have all temporary BMPs that are no longer needed been removed?		
Y	N	N/A	Are trash containment units available?		
Y	N	N/A	Is the site clean and orderly?		
Y	N	N/A	Is there a concrete/contaminate washout basin in the vicinity?		
<b>Notes</b>					
<b>Violations</b>					
Violation:					
Type of Enforcement:					
Inspector's Signature: _____ Date: _____					

## **APPENDIX E**

### Spill Prevention and Response

Standard Operating Procedure for:	
<b>Spill Prevention and Response: Spills, Illicit Discharges and Improper Disposals</b>	
Purpose of SOP:	To notify the correct responder in the event of a spill, illicit discharge, or improper disposal

**No Immediate Danger**-If the event does not pose an immediate threat to life, health or safety

- Call City Hall – (205) 956-9200
- Notify the city through the Contact webpage

**Immediate Danger**-If the event does pose an immediate threat to life, health, or safety; or if you are uncertain if the event poses a threat:

- Call 911
- Call City Hall – (205) 956-9200

**City of Irondale Fire Department Standard Operating Procedure (SOP)**

If the event can be managed by Fire Department Personnel:

- If possible, shut off the source of the spill immediately
- Deploy absorbent products and/or diking materials to contain the spill.
- Spills on pervious areas may require removal of soil or other contaminated materials.
- Consult Jefferson County EMA for disposal requirements for all products and materials used to mitigate spills
- If the event requires outside personnel: The Irondale Fire Department will contact Jefferson County EMA and follow EMA protocol. Hazmat and decontamination units will be contacted as needed.

## **APPENDIX F**

### Pollution Prevention/Good Housekeeping for Municipal Operations

## Quarterly Inspection Checklist

Inspection Area	Status (Please answer with Acceptable/Needs Attention/Not Applicable)	Comments	Date Resolved (if applicable)
Check refuse areas for trash on the ground that could contaminate stormwater or be washed away in stormwater			
Check all exterior vehicle and equipment areas for leaks, spills, drips, or excess dirt - Street sweeping necessary?			
Check all exterior vehicle and equipment areas for leaks, spills, drips, or excess dirt - drip pan use acceptable?			
Check fueling areas for leaks, spills, or drips			
Check exterior petroleum storage areas for leaks, spills, or drips			
Clean-up of tracked sand that might allow stormwater transport of sand			
Check calcium chloride tank for leaks, spills, or cracks			
Check vehicle washing area for excess sediment or wastes			
Other:			
Other:			

**Instructions:** This form needs to be used for regular (quarterly) inspections at vehicle/equipment maintenance facilities. More information on pollution prevention and good housekeeping can be found in Chapter 3 of the 2011 Guidelines and Standard Operating Procedures Manual (SOP manual)

Municipality \_\_\_\_\_ Division \_\_\_\_\_ Date \_\_\_\_\_

Standard Operating Procedure for:		
<b>Pollution Prevention/Good Housekeeping for Municipal Operations: Special Events</b>		
Purpose of SOP:	To identify the ways the city reduces the amount of trash entering the MS4 as well as the waters of the State.	

**City Policy for Special Events**

- Provide extra trash receptacles for event to reduce litter.
- Provide recycling receptacles during an event to reduce litter.
- Provide extra personnel during event to pick-up litter during and after event.
- Cleanup event area within 24 hours.

## **APPENDIX G**

### Industrial Storm Water Runoff

Irondale High Risk Sites

BUSINESS NAME	ADDRESS	CITY	STATE	ZIP	TYPE	LATITUDE	LONGITUDE
MERCEDES OF BIRMINGHAM	750 MERCEDES WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52460658	-86.66682791
PRO PM INC.	4965 HORST HILL RD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52421416	-86.65698253
Chevron Irondale	1811 Grants Mill Rd	IRONDALE	AL	35210	GASOLINE STATION	33.52162759	-86.66045096
PORSCHE BIRMINGHAM	3001 TOM WILLIAMS WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.51994827	-86.66294776
LAND ROVER OF BIRMINGHAM	3000 TOM WILLIAMS WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52073091	-86.66198753
MINI OF BIRMINGHAM	2001 TOM WILLIAMS WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52054979	-86.66372493
BMW OF BIRMINGHAM	1000 TOM WILLIAMS WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52204099	-86.66360188
LEXUS OF BIRMINGHAM	1001 TOM WILLIAMS WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52169384	-86.66478474
AUDI BIRMINGHAM	1314 GRANTS MILL WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52007966	-86.66105127
BENCHMARK CHRYSLER JEEP INC	1313 GRANTS MILL WAY	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.51935317	-86.66198585
BENCHMARK IMPORTS, LLC.	1837 GRANTS MILL RD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52132656	-86.65942535
MASERATI,ALFA ROMEO,FIAT OF BHM	1837 GRANTS MILL RD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.52106646	-86.65938838
S & G FOOD MART	1200 GRANTS MILL RD	IRONDALE	AL	35210	GASOLINE STATION	33.52135811	-86.66028026
WINDHAM & BUSH TIRE AND AUTO SERVICE	208 E VENTURA DR. 35235	IRONDALE	AL	35235	AUTOMOTIVE, GENERAL REPAIR	33.58776051	-86.65757555
CIRCLE K STORES INC	1816 CRESTWOOD BLVD,	IRONDALE	AL	35210	GASOLINE STATION	33.58780887	-86.65749785
IRONDALE CHEVRON/KRISPY CRUNCH	1804 CRESTWOOD BLVD	IRONDALE	AL	35210	GASOLINE STATION	33.53248784	-86.70573941
AAMCO TRANSMISSIONS	1730 CRESTWOOD BLVD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.53254661	-86.70601247
T.J.TIRES	1708 CRESTWOOD BLVD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.53171542	-86.70674153
PINE TREE COUNTRY CLUB	5100 PINE WHISPERS DR	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.52724449	-86.65306013
READYMIX U.S.A.	2561 RUFFNER ROAD	IRONDALE	AL	35210	MISC.	33.57794100	-86.66925363
SHERWIN WILLIAMS COMPANY #2088	1905 CRESTWOOD BLVD	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.53398528	-86.70133160
SUPERIOR MOWER AND POWER	2909 RUFFNER ROAD	IRONDALE	AL	35210	GENERAL REPAIR	33.58525746	-86.65995207
SUNOCO #233	2709 CRESTWOOD BLVD	IRONDALE	AL	35210	GASOLINE STATION	33.53820473	-86.69301750
SPRINGER EQUIPMENT	4263 UNDERWOOD IND. DR	IRONDALE	AL	35210	FORK LIFT GENERAL REPAIR	33.56417899	-86.68306936
INDUSTRIAL BATTERY AND CHARGER	4211 UNDERWOOD IND. DR	IRONDALE	AL	35210	MISC.	33.56518920	-86.68460257
V&W SUPPLY COMPANY	1271 OLD HWY 11	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.59102969	-86.65052846
WITTICHEN SUPPLY	1266 OLD HWY 11	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.59137182	-86.65110078
CITGO GAS A CHEAP	3300 CRESTWOOD BLVD	IRONDALE	AL	35210	GASOLINE STATION	33.54677372	-86.68194861
IRONDALE COLLISION	3300 CRESTWOOD BLVD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.54683050	-86.68152239
LESS DOWN TIME TRUCK EQUIPMENT REPAIR	5961 HWY 78 EAST	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.54780525	-86.62255973
SHELL MINIT MAN 108	4797 HIGHWAY 78 EAST	IRONDALE	AL	35210	GASOLINE STATION	33.54751753	-86.66359082
ROYAL PAINTS INC.	7960 CRESTWOOD BLVD	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.53153356	-86.70758156
SAVE A TRIP BIRMINGHAM, INC.	511 VULCAN DRIVE STE 111	IRONDALE	AL	35210	DRY CLEANING AND LAUNDRY EXCEPT NO COIN	33.53961960	-86.69752076
CITY OF IRONDALE	101 SOUTH 20TH STREET	IRONDALE	AL	35210	GENERAL REPAIR, FUEL STATION	33.53834136	-86.70660909
IRONDALE BP	5400 BEACON DR.	IRONDALE	AL	35210	GASOLINE STATION	33.53379051	-86.70163100
STULTS TRUCK REPAIR, INC	1955 ALTON RD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.56036014	-86.65621642
TERMINIX INTERNATIONAL CO , LP.	2081 ALTON ROAD	IRONDALE	AL	35210	EXTERMINATING SERVICES	33.56403567	-86.64909113
HUNTER OIL COMPANY	2145 ALTON ROAD	IRONDALE	AL	35210	MISC.	33.56550601	-86.64659232



Irondale High Risk Sites

BUSINESS NAME	ADDRESS	CITY	STATE	ZIP	TYPE	LATITUDE	LONGITUDE
NORFOLK SOUTHERN RAILROAD	1901 RUFFNER ROAD	IRONDALE	AL	35210	RAIL YARD, FUEL STATION	33.54510790	-86.69951297
TIRE ENGINEERS	730 OLD GRANTS MILL RD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.53332886	-86.69554096
ALABAMA PROFESSIONAL SERVICES,	3340 RICHWOOD AVE	IRONDALE	AL	35210	EXTERMINATING SERVICES	33.53967856	-86.64578229
TOM WILLIAMS COLLISION	1874 GRANTSMILL ROAD	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.51967015	-86.65785458
HARRIS AUTOMOTIVE	104 22ND ST S	IRONDALE	AL	35210	AUTOMOTIVE, GENERAL REPAIR	33.53944186	-86.70442116
CROWN PEST CONTROL, LLC	4131 RIVERBROOK RD	IRONDALE	AL	35210	EXTERMINATING SERVICES	33.51012155	-86.66954298
PRO-TECH EXTERMINATING , INC.	5828 OLD LEEDS RD	IRONDALE	AL	35210	EXTERMINATING SERVICES	33.53533742	-86.67433072
JAMES M. PLEASANTS COMPANY, INC	508 25TH ST S	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.53918323	-86.69944424
WEATHERTECH DISTRIBUTING COMPANY	501 28TH ST S	IRONDALE	AL	35210	MERCHANDISE , GENERAL STORES	33.54154517	-86.69294626
LILLY COMPANY	2816 5TH AVE SOUTH	IRONDALE	AL	35210	FORK LIFT GENERAL REPAIR	33.54278100	-86.69220245

## Stormwater Discharge Inspection for Industrial and Commercial Facilities

Inspection Team:	Date:	Time:
Facility Name:	Facility Contact and Title:	NAICS code:
Facility Street Address:	City:	Zip:
Phone Number:	Fax Number:	
Business License #:	Facility Size (acres):	
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 specific 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:

Printed Name of Inspection Team Member:

Title:

Signature: