Storm Water Management Program Plan
June 2019

HUNTSVILLE
The Star of Alabama

City of Huntsville, Alabama
Phase I MS4
NPDES Permit No. ALS000005

Prepared by
S&ME, Inc.

360D Quality Circle NW, Suite 450D
Huntsville, AL 35806

June 21, 2019

City of Huntsville
Department of Natural Resources
302 Fountain Circle
Huntsville, Alabama 35801

Attention: Mr. Scott Cardno, Director of Natural Resources

Reference: **Storm Water Management Program Plan**
City of Huntsville Municipal Separate Storm Sewer System
Huntsville, Alabama
NPDES Permit No. ALS000005
S&ME Project No. 4482-19-001

Dear Mr. Cardno:

S&ME, Inc. has assisted the City of Huntsville with the preparation of the Storm Water Management Program Plan (SWMPP) for the Huntsville Phase I Municipal Separate Storm Sewer System in accordance with S&ME Proposal No. 44-1800325 REV 1, dated November 16, 2018 and authorized by Resolution 18-1142 on December 20, 2018.

One electronic copy of the SWMPP has been provided to you for submittal to ADEM. Following ADEM's review and acknowledgment of the SWMPP, S&ME will provide a hardcopy of the final SWMPP for your records.

S&ME appreciates the opportunity to be of service to you. If you have any questions regarding the information provided herein, please do not hesitate to contact us.

Sincerely,

S&ME, Inc.

Sarah L. Yeldell, P.E.
Project Manager

Charles R. Oligee, P.E.
Senior Engineer

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1.0 Introduction

The Storm Water Management Program Plan (SWMPP) is required by Part II of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Individual Permit ALS000005 for discharges from the City of Huntsville municipal separate storm sewer system (Huntsville MS4).

1.1 Permit History

The Storm Water Phase I Final Rule issued by the United States Environmental Protection Agency (EPA) in 1990 requires coverage of all operators of "medium" and "large" MS4s serving populations of 100,000 or greater. The Phase I NPDES Permit ALS000005 for storm water discharges from the Huntsville Area Medium MS4 was issued to the City of Huntsville, the City of Madison, and the Alabama Department of Transportation (ALDOT) with an effective date of October 1, 2001. The five-year permit expired on September 30, 2006 and permit coverage was administratively extended.

NPDES Permit ALS000005 covered all areas within the corporate boundaries of the City of Huntsville and the City of Madison. From 2001 to 2013, the City of Huntsville, the City of Madison, and ALDOT operated as co-permittees under the joint MS4 Permit. In April of 2013, ALDOT was issued a separate Phase I permit and ALDOT's coverage under the permit with Huntsville and Madison was terminated. In May of 2015, the City of Madison was issued an individual Phase II permit, and Madison's coverage under ALS000005 was terminated.

In 2018, ADEM personnel met with representatives of the City of Huntsville to prepare a reissued Phase I permit to replace the 2001 permit. In June of 2018, the City of Huntsville received a draft of the Phase I permit for reissuance. The draft of reissued permit ALS000005 was filed for public notice on June 29, 2018.

Phase I NPDES Permit No. ALS000005 for storm water discharges from the Huntsville MS4 was issued to the City of Huntsville with an effective date of **October 1, 2018**. The reissued permit replaces the 2001 permit previously issued to the City of Huntsville, and applies to the corporate boundaries of the City of Huntsville. The permit will expire on **September 30, 2023**. A copy of the reissued Phase I NPDES Permit is included in Appendix B.

1.2 Huntsville MS4 Area

The City of Huntsville Municipal Separate Storm Sewer System (Huntsville MS4) is defined as the area within the city limits. A map outlining the current corporate boundaries of the City of Huntsville is included in Appendix A as **Figure 1**.

At the time of the 2010 Census, the City of Huntsville had a total population of 180,105.

1.3 Hydrologic Units in the MS4 Area

The Tennessee River is the ultimate receiving water for the Huntsville MS4.

Table 1-1 Hydrologic Hierarchy

REGION	06	Tennessee
SUBREGION	06-03	Middle Tennessee-Elk
BASIN	06-03-00	Middle Tennessee-Elk
SUBBASIN	06-03-00-02	Wheeler Lake

Table 1-2 HUC 10 Watersheds in the MS4 Area

Watershed	10 Digit HUC
Upper Flint River	06030002-03
Lower Flint River	06030002-04
Huntsville Spring Branch-Indian Creek	06030002-05
Limestone Creek	06030002-07
Piney Creek	06030002-08
Tennessee River-Wheeler Lake	06030002-09
Upper Wheeler Lake	06030002-11

Table 1-3 HUC 12 Subwatersheds in the MS4 Area

Subwatershed	12 Digit HUC	Portion of MS4 in Subwatershed (Sq Mi)	% of MS4 In Subwatershed
Banyon Creek-Beaverdam Creek	06030002-03-05	7.10	3.25
Lower Brier Fork Flint River	06030002-03-06	0.10	0.05
Acuff Spring-Flint River	06030002-04-03	10.59	4.84
Goose Creek-Flint River	06030002-04-04	17.85	8.16
Yellow Bank Creek-Flint River	06030002-04-05	6.31	2.89
Upper Indian Creek	06030002-05-01	12.19	5.58
Upper Huntsville Spring Branch	06030002-05-02	35.89	16.42
Barren Fork Creek	06030002-05-04	15.30	7.00
Lower Indian Creek	06030002-05-05	10.00	4.57
Lower Huntsville Spring Branch	06030002-05-05	25.81	11.81
Middle Limestone Creek	06030002-07-02	4.68	2.14

Subwatershed	12 Digit HUC	Portion of MS4 in Subwatershed (Sq Mi)	% of MS4 In Subwatershed
Lower Limestone Creek	06030002-07-03	9.67	4.42
Lower Piney Creek	06030002-08-03	3.71	1.70
Aldridge Creek	06030002-09-03	21.71	9.93
Bartee Branch-Tennessee River	06030002-09-04	8.90	4.07
Oakland Spring Branch-Beaverdam Creek	06030002-09-05	21.59	9.88
Matney Branch-Tennessee River	06030002-09-06	7.09	3.24
Swan Creek	06030002-11-01	0.13	0.06

A map showing the subwatersheds in relation to the Huntsville MS4 boundary is included as **Figure 2** in Appendix A.

1.4 Water Quality Concerns

Section 303(d) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987, and the USEPA Water Quality Planning and Management Regulations (40 CFR 130) require states to identify waterbodies not in compliance with the water quality standards applicable to their designated use classifications. Section 303(d) then requires that total maximum daily loads (TMDLs) be determined for all pollutants causing violation of applicable water quality standards in each identified segment.

1.4.1 Impaired Waterbodies within the City Limits

The Huntsville city limits currently encompass the following impaired waterbodies.

Table 1-4 Impaired Waterbodies within the City Limits

Waterbody	Impaired Segment	Type	Causes
Flint River	AL06030002-0403-112	TMDL	Fecal coliform
		303(d)	Turbidity from agriculture, land development
Chase Creek	AL06030002-0403-302	TMDL	CBOD, NBOD, Siltation
		303(d)	Pathogens (E. Coli) from pasture grazing
Goose Creek	AL06030002-0404-200	TMDL	CBOD, NBOD, E. Coli

Waterbody	Impaired Segment	Type	Causes
Indian Creek	AL06030002-0501-110	TMDL	CBOD, NBOD, Siltation
		303(d)	Pathogens (E. Coli) from collection system failure, pasture grazing, urban runoff/storm sewers
Huntsville Spring Branch	AL06030002-0503-102	303(d)	Metals (Arsenic) from urban runoff/storm sewers
Indian Creek	AL06030002-0505-102	303(d)	Pathogens (E. Coli) from collection system failure, pasture grazing, urban runoff/storm sewers
Limestone Creek	AL06030002-0703-102	TMDL	CBOD, NBOD, Siltation
Aldridge Creek	AL06030002-0903-100	TMDL	CBOD, NBOD, Siltation

A map showing the impaired waterbodies in relation to the Huntsville city limits is included as **Figure 3** in Appendix A.

1.4.2 Impaired Watersheds Intersecting the City Limits

In addition to the impaired waterbodies, the Huntsville city limits encompass portions of watersheds for the following impaired waterbodies:

Table 1-5 Portions of Impaired Watersheds within the City Limits

Watershed	Impaired Segment	Type	Causes
Beaverdam Creek	AL06030002-0305-100	303(d)	Siltation from crop production, land development
Brier Fork	AL06030002-0306-110	303(d)	Siltation from crop production, land development
Indian Creek	AL06030002-0505-111	303(d)	Nutrients from agriculture
Tennessee River	AL06030002-0904-100	303(d)	Nutrients from agriculture
Tennessee River	AL06030002-0906-102	303(d)	Nutrients from agriculture
Limestone Creek	AL06030002-0906-600	303(d)	Metals (Mercury) from atmospheric deposition

Watershed	Impaired Segment	Type	Causes
Swan Creek	AL06030002-1101-101	TMDL	CBOD, NBOD, Siltation
		303(d)	Nutrients from agriculture, municipal, urban runoff/storm sewers
Swan Creek	AL06030002-1101-102	TMDL	CBOD, NBOD, Siltation
Tennessee River	AL06030002-1102-102	303(d)	Nutrients from agriculture
Tennessee River	AL06030002-1102-103	303(d)	Nutrients from agriculture

1.4.3 Construction Priority Sites

Additionally, construction sites within the Limestone Creek, Indian Creek, Beaverdam Creek, Brier Fork, Flint River, Chase Creek, Aldridge Creek, and Swan Creek watersheds are considered Priority Construction Sites, as defined in Part V of the 2016 Alabama Construction General Permit. A map showing the portions of the City located within the construction Priority watersheds is included as **Figure 4** in Appendix A.

2.0 SWMPP Development, Review, and Update

2.1 SWMPP Components

Part II of the reissued Phase I Permit requires that the Permittee develop and implement a storm water management program plan that includes the following ten minimum control measures:

1. Storm Water Collection System Operations
2. Public Education and Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Spill Prevention and Response
7. Pollution Prevention/Good Housekeeping for Municipal Operations
8. Application of Pesticide, Herbicide, and Fertilizers (PHFs)
9. Oils, Toxics, and Household Hazardous Waste Control

10. Industrial Storm Water Runoff

Program details are outlined in the following sections.

2.2 Annual Review

The Storm Water Management Program Plan (SWMPP) will be reviewed annually by the City of Huntsville as required by Part II.D.1 of the Permit. The review will be performed in conjunction with the preparation of the Annual Report required by Part IV of the permit.

2.3 Updates to the SWMPP

The SWMPP may be updated following the procedures laid out in Part II.D of the Permit. Changes to the SWMPP replacing ineffective or infeasible BMPs or adding components, controls, or requirements may be made at any time, provided the changes are submitted to ADEM at the time the modification is made. The changes must also be documented in the Annual Report.

2.4 Responsible Party

The **Natural Resources Department** is responsible for the coordination and implementation of the SWMPP. Coordination between City departments is established in each section of the SWMPP.

3.0 Annual Reports

Part IV of the Phase I Permit issued to the City of Huntsville outlines the annual reporting requirements.

Annual Reports are due to the ADEM by **January 31** of each year. The Annual Report will cover October 1 through September 30 of the year prior to the submittal date and will include:

a. List of contacts and responsible parties

b. Overall evaluation of the Storm Water Management Program

c. Narrative report of all SWMP elements

d. Discussion of progress and results of monitoring programs

e. Status of SWMPP implementation and proposed changes to the SWMPP

f. Summary of inspections and enforcement actions

g. Implementation status of public education programs

h. Status of expenditures and budget for the past fiscal year and the next fiscal year

3.1 Recordkeeping

The SWMPP shall be retained for at least five years after coverage under the Permit is terminated. The following records shall be maintained for at least three years following termination of permit coverage:

- Records of all monitoring information
- Copies of all reports required by the permit
- Records required by the permit
- Records of all other data required by or used to demonstrate compliance with the permit

4.0 Storm Water Collection System Operations

4.1 Rationale

The City's goal is to develop and implement a program to operate City-owned/maintained structural controls in such a manner as to reduce the discharge of pollutants to the maximum extent practicable.

4.2 Strategies

The City will implement the following strategies to reduce the discharge of pollutants from City-owned/maintained structural controls.

Strategy 1. Structural Control Inventory

The GIS Department will maintain an inventory of City-owned/maintained structural controls, using the City's GIS as a tracking system. Tracking Information may include but is not limited to:

- Date of construction
- Location
- Type
- Surface area (for ponds)

A map will be developed showing the locations of each structural control for which the City is responsible. A copy of the map is included as **Figure 5** in Appendix A.

The structural controls map will be updated annually, and the revised map will be posted on the Huntsville MS4 webpage. A copy of the updated map will also be included in the Annual Report.

Evaluation Criteria: The City will report the number of structural controls owned or maintained by the City during the reporting period. A copy of the updated map and geographic coordinates of new controls will be included in the Annual Report.

Cross-Reference: Section 8.2.3, Strategy 11

Strategy 2. Structural Control Inspection Program

City-owned/maintained structural controls will be inspected annually by the Engineering Department. Detention ponds will be inspected using the **Storm Water Basin Inspection Form** included in Appendix E or an equivalent form. The inspections will evaluate the condition of the structural controls and will include observations on embankment erosion, vegetation, inlets, outlets, spillways, sediment accumulation, and the presence of litter, debris, or floatables.

Inspection reports will be maintained by the Engineering Department for a minimum of three years following the date of the inspection.

Evaluation Criteria: The City will report the number of inspections of structural controls during the reporting period, including follow-up inspections.

Cross-Reference: Section 8.2.3, Strategy 12

Strategy 3. Maintenance of City-Owned/Maintained Controls

Deficiencies identified during the structural control inspections will be corrected by Landscape Management and/or Public Works. Corrective actions include the repair and stabilization of eroded areas; the repair or replacement of damaged outlets, inlets, or spillways; and the removal of litter, sediment, and debris from the control.

Evaluation Criteria: The City will prepare a summary of the maintenance activities performed on City-owned/maintained structural controls during the reporting period for inclusion in the Annual Report.

Cross-Reference: Section 8.2.3, Strategy 12

4.3 Responsible Parties

The **GIS Department** is responsible for maintaining and mapping the inventory of City-owned/maintained structural controls. The GIS Department will provide the updated structural controls map annually, and will provide an electronic version for viewing on the Huntsville MS4 webpage. The GIS Department is also responsible for providing a list of structural controls the City owned or maintained during the reporting period to the Natural Resources Department for inclusion in the Annual Report.

The **Engineering Department** is responsible for notifying the GIS Department when a new structural control is accepted under City management. The notification will include the location and type of the structural control. The Engineering Department is also responsible for conducting the annual inspections and notifying Landscape Management of observed deficiencies. Inspection reports will be maintained by the Engineering Department for a minimum of three years following the inspection. A minimum of one inspection report from the reporting period will be provided to the Natural Resources Department for inclusion in the Annual Report.

The **Public Works Department** is responsible for performing the maintenance or cleaning required to address deficiencies observed at City-owned/maintained structural controls. Public Works is also responsible for maintaining a record of the maintenance activities as well as the amount of litter, debris, sediment, and floatables removed from City-owned/maintained structural controls during the reporting period. Public Works will provide the record to the Natural Resources Department for inclusion in the Annual Report.

The **Natural Resources Department** is responsible for compiling the required data, as received from participating departments, for inclusion in the Annual Report. Natural Resources is also responsible for coordinating with the Communications Department to post the revised structural control map on the Huntsville MS4 webpage, either as an individual map or as part of the Annual Report.

5.0 Public Education and Public Involvement

The City will implement the following strategies as part of their Public Education and Outreach Program. To evaluate the success of the program and aid in preparing the required Annual Reports, evaluation criteria have been established for each strategy.

5.1 Rationale

The City's goal is to have a comprehensive and effective public education and outreach program, the intent of which is to:

1. Generate awareness of storm water pollution prevention by educating people about the storm drain system and its relationship to the health of local waterways;

2. Change behavior patterns through education and encouragement of active participation in water pollution prevention; and,

3. Inform the public of steps they can take to reduce pollutants in storm water runoff.

5.1.1 Target Audiences

The following list outlines the primary target audiences within the City and the topics identified in the individual permit for each audience:

- **General Public (homeowners and citizens)**
  - General impacts litter has on water bodies and ways to reduce litter;
  - General impacts of storm water flows into surface water from impervious surface;
  - Source control BMPs in areas of pet waste, vehicle maintenance, landscaping and water reuse;
  - Impacts of illicit discharges and how to report them.

- **General Public, Businesses (including home-based and mobile businesses)**
  - BMPs for the use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials;
  - Impacts of illicit discharges and how to report them.

- **Homeowners, Landscapers, Property Managers, and City Personnel**
  - BMPs for use and storage of pesticides and fertilizers;
  - BMPs for carpet cleaning and auto repair maintenance;
  - Landscape techniques that protect water quality; and
  - Storm water pond maintenance.

- **Engineers, City Personnel, Land Use Planners, Developers, and Contractors**
  - Impacts of increased storm water flows into receiving water bodies;
  - Low Impact Development techniques;
  - Technical standards for construction site sediment and erosion control; and
  - Storm water treatment and flow control BMPs.

5.2 Strategies

5.2.1 Public Input

Strategy 1. Huntsville MS4 Webpage

The City will develop and maintain a webpage about storm water on the City of Huntsville website. The Huntsville MS4 webpage will:

- Include general information on the Huntsville MS4
- Discuss the storm water cycle and how common contaminants enter the storm water system
- Educate households and businesses about proper and improper use, storage, and disposal of common household chemicals
- Provide links to related storm water resources
- Provide contact information for reporting illicit discharges or other storm water complaints
- Provide a link to the most recent SWMPP
- Provide a link to the most recent Annual Report

This strategy will target the general public, engineers, landscapers, business owners, land use planners, property managers, and city personnel.

Evaluation Criteria: Participation will be tracked by recording the number of "hits" on the webpage. The City will report the number of hits in the Annual Report.

Strategy 2. Seek Public Input

The City will upload the most recent Annual Report to the Huntsville MS4 Webpage. A link will be provided on the webpage for stakeholders to provide comments, questions, or concerns regarding the implementation of the SWMPP. The City will consider the received comments and respond as needed. This strategy will target the general public.

Evaluation Criteria: Participation will be tracked by the number of comments or questions received. The City will report the number of stakeholder comments received during the reporting period.

5.2.2 Litter Reduction

Strategy 3. Storm Drain Marking Program

The City will continue to partner with local businesses and schools for implementation of the storm drain marking program. Operation Green Team provides volunteers and

students seeking service hours with the appropriate paint and decals for marking the storm drains. This strategy will target the general public.

Evaluation Criteria: The City will report the number of volunteers and approximate number of storm drains marked during the reporting period.

Strategy 4. Cigarette Litter Prevention Program

The City currently promotes a program to reduce cigarette butt litter and its impacts on ground water. Individuals can contact Operation Green Team to request a free cigarette litter stand, pocket ashtray, and/or automobile/boat ash bucket. These are available to residents through a grant from Keep America Beautiful and Keep Alabama Beautiful.

Evaluation Criteria: The City will report the number of cigarette litter stands, ash trays, and ash buckets requested during the reporting period.

Strategy 5. Litter Hotline

Operation Green Team currently utilizes a litter hotline (53-CLEAN) for individuals to report occurrences of littering. Litter complaints may also be submitted online through the HSV Connect SeeClickFix program. Litter reports including vehicle tag numbers and descriptions are used to generate a letter sent to the vehicle owner, reporting that someone in the vehicle was observed littering. The letter also includes information on littering ordinances and penalties.

Evaluation Criteria: The City will report the number of litter reports received during the reporting period.

5.2.3 Education on Pollution Reduction

Strategy 6. Distribution of Storm Water Educational Material

The City will distribute storm water educational material during each reporting period. Educational material may be developed by the City, organizations such as ADEM or the EPA, or other stakeholder groups. Educational materials may be distributed using:

- The Huntsville MS4 webpage
- Flyers
- Brochures
- Operation Green Team Facebook page

Educational materials may:

- Introduce the MS4 to the general public

- Discuss the storm water cycle and how common contaminants enter the storm water system
- Educate households and businesses about proper and improper use, storage, and disposal of common household chemicals such as herbicides, pesticides, and fertilizers
- Explain how the improper use of chemicals can impact storm water quality
- Explain what individual households and businesses can do to reduce storm water pollutants
- Provide information on BMPs for use and storage of common household chemicals
- Provide information on the effects of sedimentation on the environment
- Provide information on additional resources pertaining to storm water and storm water pollution
- Provide information on storm water contacts within the City of Huntsville and information on reporting potential storm water violations

Evaluation Criteria: The City will report the types of educational materials developed or prepared for distribution during the reporting period and the method of distribution.

Strategy 7. Beautification Awards Program

The Huntsville Beautification Board was established in 1965 by Ordinance 65-130. Objectives of the Beautification Board include encouraging programs to enhance cleanliness and beautification of properties within the City. Beautification Awards are awarded annually based on six categories including first impressions, design, plants, maintenance, hardscape design/maintenance, and litter/cleanliness.

Operation Green Team will continue to sponsor the Beautification Awards program, as administered by the Beautification Board. Beautification Awards are announced at an annual event, during which the City educates landscapers on environmental techniques and the potential impact of landscaping activities on water quality. This strategy will target business owners, landscapers, and property managers.

Evaluation Criteria: The City will report the number of banquet attendees during the reporting period.

Strategy 8. Earth Day Celebration

Operation Green Team will continue to host the annual Earth Day Celebration. Approximately 12,000 to 15,000 people attend the event each year. During this event, exhibits and educational materials associated with storm water are available to the general public. This strategy will target the general public.

Evaluation Criteria: The City will report the approximate number of event attendees during the reporting period.

Strategy 9. Partnership for Public Education

Operation Green Team will continue to partner with the Huntsville Solid Waste Disposal Authority (SWDA) to provide tours for school age children. These tours include the waste-to-energy and recycling facilities, and will educate children on the importance of recycling. This strategy will target the general public.

Evaluation Criteria: The City will report the number of tours held and the approximate number of students in attendance during the reporting period.

Strategy 10. Distribute Educational Materials at Career Tech Events

Operation Green Team will continue to attend career tech events. The City will distribute educational pamphlets to students, individuals, and local businesses in attendance at these events.

Evaluation Criteria: The City will report the approximate number of attendees and pamphlets distributed at the events during the reporting period.

Strategy 11. Plan Review and Permitting

The Engineering Department will educate engineers, developers, and contractors through plan review and permitting of new construction and development. Plan review will ensure proposed projects adequately address the City's erosion, sediment, and pollution control requirements. Where possible, the City will encourage the use of Low Impact Development or other similar runoff reduction practices.

Evaluation Criteria: The City will report the total number of construction plans reviewed during the reporting period.

5.2.4 Public Participation

Strategy 12. Adopt-a-Mile

Operation Green Team coordinates the City of Huntsville Adopt-a-Mile and Adopt-a-Park programs. Volunteer groups apply to sponsor parks or road sections for a minimum of one year, and Operation Green Team provides the necessary supplies, including trash bags, can catchers, gloves and safety vests for each clean-up. This strategy will target the general public.

Evaluation Criteria: The City will report the number of miles and parks sponsored during the reporting period.

Strategy 13. Keep America Beautiful and Keep Alabama Beautiful

Operation Green Team currently organizes dozens of cleanup events yearly in support of the Keep America Beautiful and Keep Alabama Beautiful initiative. Operation Green Team provides garbage bags, garbage cans, and bins for recyclables. This strategy will target the general public.

The City will continue to maintain status as a Keep Alabama Beautiful and Keep America Beautiful affiliate.

Evaluation Criteria: The city will report the number of cleanups held, number of participants, and the number of bags of trash collected for each event during the reporting period.

Strategy 14. Great American Cleanup

The City will continue to participate in the Great American Cleanup held annually in March, April, and May. This event will kick off in front of City Hall and Operation Green Team provides garbage bags, gloves, and other supplies. This strategy will target the general public.

Evaluation Criteria: The city will report the number of participants and the number of bags of trash collected for this event during the reporting period.

Strategy 15. Neighborhood Cleanup Events

Operation Green Team currently organizes dozens of neighborhood cleanup events between the months of March and October. The City provides garbage bags, garbage cans, and bins for recyclables. This strategy will target the general public.

Evaluation Criteria: The city will report the number of cleanups held, number of participants, and the number of bags of trash collected for each event, during the reporting period.

Strategy 16. Hazardous Waste Collection Program

Operation Green Team will promote the "Handle with Care" hazardous waste collection program administered by SWDA. The program encourages residents to properly dispose of hazardous materials.

SDWA currently operates a drive-through facility that allows drop-off of household hazardous wastes five days per week during business hours. Residents of Madison County may dispose of the following types of household hazardous waste free of charge:

- Paint and paint related products
- Automotive products

- Lawn and garden chemicals
- Household cleaners
- Old TVs and computers
- Household chemicals

Evaluation Criteria: The City will report the amount of household hazardous waste collected during the reporting period.

Strategy 17. Curbside Recycling Program

Recycling within the City of Huntsville is currently accomplished through an opt-in residential curbside program administered by SDWA. The City will promote the program on the City website and encourage citizens to participate. SWDA is responsible for contracting the pickup and disposal of the recyclable materials.

Evaluation Criteria: The City will report how the recycling program was promoted and the estimated number of participants in the program. This information will help measure the public awareness of the program and degree of public participation.

Strategy 18. Plastic Cap Recycling Contest for Schools

Operation Green Team sponsors a recycling contest held October through March each year for schools within the Huntsville city limits. The schools to compete to collect the most twist-on plastic caps. The collected caps are picked up monthly by Operation Green Team and sent to a recycling facility.

Evaluation Criteria: The City will report the number of schools participating in the Plastic Cap Recycling Contest.

Strategy 19. Yard Waste Removal Program

The City will continue to provide for weekly pickup of residential yard waste and bulk trash. The intent of the strategy is to prevent yard waste from entering storm drains.

The City may apply additional costs for this service and will be included in the monthly fee for residential collection. This strategy will target the general public.

Evaluation Criteria: The City will report the number of complaints pertaining to yard waste in the MS4.

Strategy 20. Reporting and Tracking System for Complaints

The City currently maintains a web-based reporting system for individuals to report concerns or problems. The "HSV Connect" feature on the webpage is part of the SeeClickFix program. SeeClickFix collects data entered by the individual making the

report, including the location and type of issue and comments on the issue, and allows for the upload of photos or other documents.

The City will include a link to the SeeClickFix function on the Huntsville MS4 Webpage. Reports regarding non-compliant construction sites, illicit discharges, and violations of ordinances relating to storm water pollution will be directed to the appropriate City department.

Evaluation Criteria: The City will report the total number of complaints received during the reporting period. This information will help measure the effectiveness of the reporting system, as well as public awareness and concern of storm water issues.

5.2.5 Program Evaluation

Strategy 21. Program Evaluation

As detailed above, the following information will be collected for each reporting period:

- Number of webpage hits
- Number of comments received on the Annual Report or SWMPP implementation
- The estimated amount of litter collected by Adopt-a-Mile participants
- Number of yard waste issues or complaints
- Number of storm water / IDDE complaints
- Number of educational materials developed/prepared for distribution and method of distribution
- Number of construction plans reviewed
- Number of events targeted and estimated number of attendees if available
- The amount of household hazardous waste collected
- How the recycling program was promoted and the estimated number of participants

The City will utilize the collected information to evaluate the effectiveness of the public education program.

In general, the number of webpage hits is expected to rise as the public becomes more aware of the MS4 program. If a decline in visitors is observed, the City may re-evaluate the structure and content of the webpage.

The comments received on the Annual Report and SWMPP will be used to determine if additional educational effort is needed on certain topics. The type and tone of the comments will help assess the effectiveness of previous public education efforts.

Yard waste issues or complaints will be used to determine if an area should be targeted for additional promotion of the City's yard waste collection program and/or additional education regarding the impact of yard debris on water quality.

5.3 Responsible Parties

The **Huntsville Solid Waste Disposal Authority** is responsible for the curbside recycling program and the hazardous waste collection facility.

The **Public Works Department** is responsible for the weekly pickup of residential yard waste and bulk yard waste.

The **Communications Department** is responsible for reporting the number of "hits" on Huntsville MS4 webpage during the reporting period to the Natural Resources Department for inclusion in the Annual Report.

The **Engineering Department** is responsible for performing plan review regarding erosion, sediment, pollution control, drainage, and flood control. The Engineering Department is also responsible for reporting the number of plans reviewed during the reporting period to the Natural Resources Department.

Operation Green Team is responsible for coordinating public outreach events, developing or coordinating the development of educational materials or displays, and providing information on the programs and events to the Natural Resources Department for inclusion in the Annual Report.

The **Natural Resources Department** is responsible for addressing comments from the public and compiling the required data, as received from participating departments, for inclusion in the Annual Report. Natural Resources is also responsible for addressing or forwarding complaints received regarding storm water issues and tracking the total number of received complaints, the number of addressed complaints, and the number of complaints resolved during the reporting period. Natural Resources will coordinate with the Communications Department to maintain the Huntsville MS4 webpage.

6.0 Illicit Discharge Detection and Elimination

6.1 Rationale

The City's Illicit Discharge Detection and Elimination (IDDE) program is primarily designed to locate, identify, and correct illicit discharges to the MS4. The City will review the IDDE program annually and will modify the program as necessary. IDDE program modifications will be incorporated into the SWMP.

A brief summary of strategies that the City will implement as part of their IDDE Program is provided below. A more detailed scope of the planned activities, rationale, and implementation process is presented in the *City of Huntsville Illicit Discharge Detection and Elimination Program* included in Appendix D. To evaluate the success of the strategies and aid in preparing the required Annual Reports, evaluation criteria have been established for each strategy.

6.2 Strategies

6.2.1 Legal Authority

Strategy 1. NPDES Compliance Ordinance

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998 under Chapter 21 of the Code of Ordinances, City of Huntsville, Alabama *Article III. Storm Sewers*. Article III, Division 2 establishes regulations for NPDES compliance within the City. A copy of the ordinance is located in Appendix C.

The Ordinance provides the City with the ability to perform inspections, trace suspected illicit discharges, require elimination of confirmed illicit discharges, and compel compliance.

<u>Prohibit Illicit Discharges</u>

Section 21-336 of the ordinance specifically prohibits illicit discharges into the Huntsville storm sewer system, with the exception of those non-storm discharges explicitly exempted in the ordinance. The ordinance specifically identifies an illicit discharge as "*any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer system) and discharges from firefighting and emergency management activities*."

<u>Prohibit Illicit Connections</u>

The existing ordinance does not specifically prohibit illicit connections. Part II.B.3.a(2) of the Phase I permit requires that the City have the legal authority to prohibit and eliminate illicit connections.

Provisions for Inspections

Section 21-338(a) authorizes the manager of the division of natural resources and environmental management of the city or his designated representative to enter and inspect any private property or premises to determine the existence and source of contamination.

Enforcement

Section 21-342 of the ordinance authorizes the Natural Resources Director or any person under his supervision to issue citations.

The ordinance specifically prohibits the City from taking any enforcement action for a violation of the ordinance if ADEM has already commenced enforcement actions for the same violation, including the issuance of a Notice of Violation or an administrative order.

Evaluation Criteria: The NPDES Compliance ordinance will be reviewed on an annual basis and updated as needed. The ordinance will be evaluated on its effectiveness in addressing identified illicit discharges and preventing repeat offenders.

The City will annually report the number of illicit discharge complaints received, the number of illicit discharges identified during the reporting period, and the number of resolved violations.

6.2.2 Field Assessment Activities

Strategy 2. Outfall Map

The GIS Department will develop and maintain a map of identified outfalls within the Huntsville MS4 area. The map will include, at a minimum:

- Latitude/longitude of all known major outfalls
- Waters of the State within the MS4 area that receive discharges from these major outfalls

A preliminary map of major outfalls within the city limits is included as **Figure 6** in Appendix A. A preliminary list of the identified major outfalls is included in Appendix F.

Evaluation Criteria: A copy of the updated map will be included with each Annual Report.

Strategy 3. Outfall Reconnaissance Inventory for Previously-Unidentified Outfalls

The City will implement a program designed to identify previously unknown outfalls to the MS4. The GIS Department routinely performs mapping activities to verify previously-mapped features. Outfalls will be logged during routine mapping activities. Previously-

unidentified outfalls will be scheduled for Outfall Reconnaissance Inventory inspection. The implementation process is detailed in Section 4 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will maintain records of field observations. The City will report the number of previously-unknown outfalls identified during the reporting period. The City will provide updated tables and maps that include the outfalls identified.

Strategy 4. Verification of Outfalls Identified During Plan Review

During the review of construction plans, the Engineering Department will identify the locations where a proposed development plans to discharge to a waterbody within the MS4. Proposed outfalls are identified on the preliminary plat. Following construction, as-built drawings are required to be submitted to the Engineering Department.

Outfall information provided on the as-built drawings will be verified through field observation during the final inspection by the GIS Department. Outfalls verified in the field will be added to the GIS database within approximately 30 days of being verified. The implementation process is detailed in Section 4.3 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will maintain records of field verification observations. The City will report the number of new outfalls verified during the reporting period. The City will provide updated tables and maps that include verified major outfalls.

Strategy 5. Dry Weather Inspections of Major Outfalls

The City will conduct dry weather inspections of all identified major outfalls within the City at least once during each five-year permit cycle. Outfalls in designated IDDE Priority Areas will be visually inspected once every three years. The rationale for designating the IDDE Priority Areas is discussed in Section 3 of the IDDE Program in Appendix D. The implementation of the dry weather screening program is detailed in Section 6 of the IDDE Program.

Evaluation Criteria: The City will maintain records of field observations. The City will report the number of outfalls inspected during the reporting period.

Strategy 6. Suspect Discharge Screening

If a dry-weather flow is observed during the dry weather inspection, it will be screened to determine if it is a potential illicit discharge. The implementation process is detailed in Section 6.9 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will maintain records of suspect discharge screening results. The City will report the number of identified dry weather flows observed during the reporting period, as well as the number of dry weather flows determined by field screening to be suspect discharges.

Strategy 7. Suspect Discharge Sampling

If a dry weather flow has a severity index of 3 on one or more indicators in Section 4 of the Outfall Reconnaissance Inventory Field Sheet, or if field screening indicates a suspect discharge, field crews will collect samples for further analysis. The implementation process is detailed in Section 6.10 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will maintain records of suspect discharge sampling results. The City will report the number of samples collected during the reporting period and the number confirmed to be an illicit discharge.

Strategy 8. Outfall Designation

Data from each Outfall Reconnaissance Inventory Field Sheet will be analyzed to designate the observed outfall as having obvious, suspect, possible, or unlikely discharge potential. Obvious and suspect illicit discharges will be investigated according to the schedule detailed in Section 6.12 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will report the number of outfalls that required further investigation.

6.2.3 Illicit Discharge Investigation

Strategy 9. Illicit Discharge Tracing

Illicit discharge investigations will be performed to determine the source of an identified illicit discharge. The implementation process is detailed in Section 7 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will report the number of illicit discharge investigations performed during the reporting period. The City will also report the number of confirmed illicit discharges.

6.2.4 Corrective Actions

Strategy 10. Corrective Action Record Keeping

When a suspect illicit discharge or illicit connection is identified, a case log detailing pertinent information will be created. Throughout the problem investigation and corrective action activities, the information related to the incident or property in question will be documented in the case log, as detailed in Section 7.2 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will maintain records of the corrective actions. The City will report the number of confirmed illicit discharges and the number of illicit discharges

corrected or eliminated during the reporting period. The City will also report the number of confirmed illicit discharges where corrective action is pending.

Strategy 11. Illicit Discharge Elimination

Enforcement actions available to the City include a written Notice of Violation and citation. The procedures for eliminating identified illicit discharges or connections are detailed in Section 8 of the IDDE Program in Appendix D.

Evaluation Criteria: The City will maintain records of the corrective actions. The City will report the number of illicit discharges corrected or eliminated during the reporting period.

Strategy 12. Notification of Illicit Discharges from an Adjacent MS4

The Huntsville MS4 is bordered in several areas by the City of Madison Phase II MS4, the Madison County Phase II MS4, University of Alabama in Huntsville Phase II MS4, the Alabama A&M University Phase II MS4, and the Redstone Arsenal Phase II MS4. Should the City identify a suspect illicit discharge originating within a neighboring MS4, the City will notify the appropriate MS4 within 48 hours of observation of the suspect illicit discharge.

The notification to the responsible MS4 will include the following information:

1. Location of the suspect illicit discharge, including latitude and longitude, if known
2. Type of illicit discharge, if known
3. Estimated quantity or flow rate, if known
4. Origin or suspected origin of the suspect illicit discharge, if known
5. Date and time the suspect illicit discharge was observed
6. Description of affected media, including the name of the receiving waterbody, if known
7. Corrective actions being taken within the Huntsville MS4, if any

Evaluation Criteria: The City will report the total number of suspect illicit discharges reported to adjacent MS4s during the reporting period. Copies of the notification reports will be included in the Annual Report.

6.2.5 Public IDDE Education

Strategy 13. Public Reporting

The City currently maintains a web-based reporting system for individuals to report concerns or problems. The "HSV Connect" feature on the webpage is part of the SeeClickFix program. SeeClickFix collects data entered by the individual making the report, including the location and type of issue and comments on the issue, and allows for the upload of photos or other documents.

The City will maintain a link to the SeeClickFix function on the Huntsville MS4 webpage. Reports regarding non-compliant construction sites, illicit discharges, and violations of ordinances relating to storm water pollution will be directed to the appropriate City departments.

Evaluation Criteria: The City will report the total number of received complaints, the number of addressed complaints, and the number of complaints resolved during the reporting period. This information will help measure the effectiveness of the reporting system, as well as public awareness and concern of storm water issues.

6.2.6 Municipal Employee Training

Strategy 14. Municipal Employee Training

Appropriate City personnel will undergo annual training on illicit discharge identification, reporting, and corrective actions.

Evaluation Criteria: The City will report the dates municipal employees underwent IDDE training, the number of attendees, and the departments represented.

6.3 Responsible Parties

The **Engineering Department** is responsible for verifying as-built drawings through field observation during the final inspection and notifying the GIS Department of new outfalls added to the MS4.

The **GIS Department** is responsible for performing the outfall verification and Outfall Reconnaissance Inventory and reporting suspected illicit discharges to the Natural Resources Department for further investigation.

Other City departments, including the **Public Works Department**, **Landscape Management**, the **Fire Department**, and the **Police Department**, will report illicit discharges observed during the course of their normal duties. Reports of observed or suspected illicit discharges will be made to the Natural Resources Department.

Water Pollution Control is responsible for corrective actions regarding Sanitary Sewer Overflows (SSOs) and for reporting SSO corrective actions to the Natural Resources Director.

The **Fire Department** is responsible for corrective actions regarding hazardous spill response and for reporting spills over 25 gallons to the Natural Resources Director.

City departments storing, using, or disposing of potential pollutants are responsible for selecting appropriate personnel to attend annual awareness training.

The **Natural Resources Department** is responsible for coordinating the Outfall Reconnaissance Inventory and managing the investigation of a suspect illicit discharge. The Natural Resources Department is also responsible for compiling the required data, as received by the participating departments, for inclusion in the Annual Report.

7.0 Construction Site Storm Water Runoff Control

The City will implement the following strategies as part of their Construction Site Storm Water Runoff Control Program. To evaluate the success of the program and aid in preparing the required Annual Reports, evaluation criteria have been established for each strategy.

7.1 Rationale

Construction sites are a significant source of pollutants to storm water including sediment, paints, concrete washout, glues, and oils. The design and implementation of appropriate Best Management Practices can prevent pollutant discharges and mitigate the environmental impacts of construction projects. A robust inspection and enforcement program will ensure that construction activities are performed in compliance with state regulations and local ordinances.

The City's Construction Site Storm Water Runoff Control Program is designed to encourage proper planning and implementation of construction site BMPs to protect water quality within the MS4 and its receiving waters. The primary target audiences within the City are:

- **Developers, Contractors, and Homebuilders**
  - Potential contributors of storm water pollution through development and construction activities.
- **Engineers**
  - Responsible for designing effective best management practices to minimize off-site sedimentation from construction activities.

7.2 Strategies

7.2.1 Legal Authority

Strategy 1. Erosion and Sediment Control Ordinance

City of Huntsville Ordinance Number 15-951 was adopted on January 14, 2016 amending Chapter 12 of the Code of Ordinances, City of Huntsville, Alabama *Article VI Stormwater Management*. Article VI, Division 1 establishes regulations for storm water drainage facilities and land disturbance activities within the City. A copy of the ordinance is located in Appendix C.

<u>Require Erosion and Sediment Controls</u>

The storm water management ordinance incorporates the *City of Huntsville Stormwater Management Manual* by reference. Chapter 10 of the manual requires that the submitted erosion control plan include appropriate measures for surface stabilization, runoff control, and sediment control.

The storm water management ordinance does not explicitly require the implementation of erosion and sediment controls.

Provisions for Inspections

Section 12-334(d) authorizes the city engineer to enter upon the premises of any land within the city for which a grading or building permit application has been filed to inspect the site before, during, and upon conclusion of any land disturbance activity to determine compliance with the Huntsville Code of Ordinances.

Sanctions to Ensure Compliance

Section 12-334(f) authorizes the city engineer or an employee of her department designated by her to issue citations to any person found to be in violation of the provisions of the ordinances or the *City of Huntsville Stormwater Management Manual*.

Section 12-334(g) authorizes the city engineer to issue a stop work order to any person found to be in violation of the provisions of the ordinances.

Evaluation Criteria: The ordinances governing storm water pollution prevention will be reviewed on an annual basis and updated as needed.

Strategy 2. Storm Water Manual Revisions

The *City of Huntsville Stormwater Management Manual* is the document used to establish regulations and technical guidelines for developers, landowners, builders, architects, engineers, and others involved in development activities. It details policy, permitting requirements, design regulations, and technical information for storm water activities. It was first issued in 1991 and was amended in 1991 and 1994.

- Chapter 2 *Policy and Permitting* outlines the requirement for a Grading Permit and the application process, as well as the enforcement process for noncompliant sites.
- Chapter 10 *Erosion and Sediment Control* outlines the requirements for Erosion and Sediment Control Plans.

The manual and its amendments pre-dates the 1995 NPDES Phase II rule extending the construction NPDES program to construction sites disturbing one acre or more. The manual does not discuss the requirements of the Alabama Construction General Permit (CGP), nor does it require coverage under the Alabama CGP. The BMP details in the manual also conflict with the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*.

The City will evaluate the *Stormwater Management Manual* for compliance with the Alabama Construction NPDES program and the most recent version of the Alabama Handbook. Following the evaluation, the City will revise the Manual to incorporate the requirements of the Alabama CGP, the Alabama Handbook, and the MS4 SWMPP.

Following the initial revisions, the *Stormwater Management Manual* will be reviewed annually. The results of grading permit plan reviews will be considered during the review, as will inspection results and public comments.

The *Stormwater Management Manual* will be reviewed in depth following the Alabama CGP re-issuance cycle to ensure compliance with the most recent CGP. The BMP specifications included in the Manual will also be reviewed following the issuance of a revised Alabama Handbook.

Evaluation Criteria: A brief summary of changes to the *City of Huntsville Stormwater Management Manual* will be included in the Annual Report. If no changes are made during the reporting period, that will be noted.

Strategy 3. Subdivision Regulations Revisions

The Subdivision Regulations for the City of Huntsville, Alabama were first adopted in 1990 and were updated in May 2007. The Subdivision Regulations detail the procedures by which residential and nonresidential subdivisions are approved by the City Planning Commission.

- Article 3 *Subdivision Application Procedure and Plat Requirements* requires the submittal of a Grading and Erosion and Sedimentation Control Plan. The Erosion and Sedimentation Control Plan is required to be in compliance with the *City of Huntsville Stormwater Management Manual*.

- Article 4 *Requirements for Improvements and Design* also requires the preparation of an Erosion Control Plan to indicate how erosion of bare ditches and drainage swales will be prevented.

The Subdivision Regulations incorporate the *City of Huntsville Stormwater Management Manual* by reference.

The City will evaluate the Subdivision Regulations for compliance with the Alabama Construction NPDES program and the most recent version of the Alabama Handbook. Following the evaluation, the City will revise the Subdivision Regulations to incorporate the requirements of the Alabama CGP, the Alabama Handbook, and the MS4 SWMPP.

Evaluation Criteria: A brief summary of changes to the Subdivision Regulations will be included in the Annual Report. If no changes are made during the reporting period, that will be noted.

7.2.2 Site Plan Review and Approval

Strategy 4. Require Applicable Sites to Obtain Coverage

The City will require that all construction activities disturbing 1 acre or more (and sites less than 1 acre but that are part of a common plan of development) obtain coverage under the Alabama Construction NPDES General Permit ALR100000 or other applicable NPDES permit. The City will further require that the approved NPDES permit be submitted to the Engineering Department for review prior to the issuance of a grading permit.

Evaluation Criteria: The City will report the number of grading permits issued during the reporting period.

Strategy 5. Require Plan Submittal

The Plat Requirements detailed in the Subdivision Regulations include the submittal of a Grading and Erosion Sediment Control Plan meeting the requirements of the *City of Huntsville Stormwater Management Manual* and all other applicable regulations of the City of Huntsville.

The *City of Huntsville Stormwater Management Manual* requires the preparation and submittal of an erosion and sediment control plan for any activity requiring a grading permit. Grading permits are currently required before the commencement of any land disturbance activity including grading, excavation, clearing, filling, or construction or paving of any parking lot or existing parking area exceeding 10,000 s.f. of impervious area.

Plan review will ensure proposed projects adequately address the City's erosion, sediment, and pollution control requirements. Plan review will also take into consideration what potential impacts to water quality the project may have.

Evaluation Criteria: The City will report the number of plans reviewed and the number of grading permits granted during the reporting period.

Strategy 6. Plan Review Procedures

Prior to issuing a grading permit, the Engineering Department will review the Erosion and Sediment Control Plan submitted by the applicant. At a minimum, the submitted plan will be reviewed for:

1. Estimated sequence of construction
2. Inclusion of appropriate erosion and sediment controls for each phase
3. Details on methods selected for temporary and permanent stabilization
4. Compliance with the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*

5. Compliance with the Alabama Construction General Permit ALR100000

Evaluation Criteria: Based on the results of plan reviews conducted during the reporting period, the City will evaluate the plan review criteria to determine if additional metrics are necessary or if further clarification is needed for the existing metrics.

7.2.3 Public Complaint Reporting

Strategy 7. Maintain Records of Public Complaints

The City currently maintains a web-based reporting system for individuals to report concerns or problems. The "HSV Connect" feature on the webpage is part of the SeeClickFix program. SeeClickFix collects data entered by the individual making the report, including the location and type of issue and comments on the issue, and allows for the upload of photos or other documents.

The City will maintain the "HSV Connect" feature on the Storm Water Webpage. Reports regarding non-compliant construction sites will be directed to the Engineering Department.

Records of public complaints will include the following:

a. Date, time and description of the complaint

b. Location of subject construction sites

c. Identification of actions taken (e.g. inspections, enforcement, corrections). Identifying information must be sufficient to cross-reference inspection and enforcement records.

Evaluation Criteria: The City will report the total number of complaints received from HSV Connect during the reporting period. This information will help measure the effectiveness of the reporting system, as well as public awareness of and concern for storm water issues.

7.2.4 Site Inspection

Strategy 8. Best Management Practices Training

City personnel tasked with plan review will undergo training on proper design, installation, inspection, and maintenance of on-site control measures, and on new technology and practices.

City personnel tasked with conducting construction BMP inspections will be certified under an ADEM-approved Qualified Credentialed Inspector (QCI) training program and will attend annual refreshers.

Evaluation Criteria: The City will provide copies of the QCI certificates and records of awareness training received during the reporting period.

Strategy 9. Construction Site Tracking

The City will maintain a list of all active permitted construction sites within the MS4 boundary. The GIS Department will also include the active construction sites in the City's GIS. Priority Sites (as defined in Part V of the 2016 Alabama Construction General Permit) will be identified on the list and GIS map.

Evaluation Criteria: The City will include the list of active construction sites with each annual report.

Strategy 10. Inspection of Qualifying Sites

The Engineering Department will conduct regular inspections of construction sites within the Huntsville MS4. Each site will be inspected **quarterly** until permit termination. The inspector will evaluate the following:

1. Condition of the site entrances/exits
2. Effectiveness of erosion controls (e.g., diversion channels, vegetation, outlet protection, etc.)
3. Condition of erosion controls
4. Condition of discharge points from the site
5. Evidence of off-site sediment deposition
6. Condition of sediment controls (e.g., silt fence, wattles, check dams, inlet protection, etc.)
7. Condition of any sediment basins
8. Concrete washout management
9. Fueling area management
10. Sanitary waste management
11. Construction debris and trash management
12. Whether an Erosion and Sediment Control plan meeting the City's requirements is present on the site

BMP inspections will be documented using the **BMP Inspection Form** located in Appendix E or an equivalent form. Inspection documentation will include the following, at a minimum:

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, and email)
f. Description of the storm water BMP conditions
g. Photographic documentation of any issues and/or concerns
h. Evaluation of outfalls from the site
i. Determination of whether impacts have occurred to the receiving waters

If deficiencies are noted during the inspection, the inspector will notify the Engineering Department. A copy of the inspection report will be provided to the Owner and/or permit holder.

Evaluation Criteria: The City will report the number of BMP inspections conducted by City employees during the reporting period.

Cross-Reference: Section 10.2.2, Strategy 7

Strategy 11. Inspection of Priority Sites

As discussed in Section 1, construction sites within the Limestone Creek, Indian Creek, Beaverdam Creek, Flint River, Chase Creek, Aldridge Creek, and Swan Creek watersheds are considered Priority Construction Sites, as defined in Part V of the 2016 Alabama Construction General Permit. The Engineering Department will conduct inspections of Priority Sites within the Huntsville MS4 at a minimum frequency of **once per month**.

Priority Site inspections will be conducted using the same method outlined in Strategy 10 and documented using the **BMP Inspection Form** located in Appendix E or an equivalent form.

If deficiencies are noted during the inspection, the inspector will notify the Engineering Department. A copy of the inspection report will be provided to the Owner and/or permit holder.

Evaluation Criteria: The City will report the number of BMP inspections conducted at Priority Sites by City employees during the reporting period.

Strategy 12. Re-Inspection of Sites

If deficiencies are noted during the routine inspection and cannot be corrected at the time of the inspection, the site will be scheduled for re-inspection. The timeframe for re-inspection will be determined by the inspector based on the severity of the observed noncompliances.

Re-inspections will be conducted by the Engineering Department using the same method outlined in Strategy 10 and documented using the **BMP Inspection Form** located in Appendix E or an equivalent form.

Evaluation Criteria: The City will report the number of re-inspections conducted at deficient sites by City employees during the reporting period.

7.2.5 Enforcement Response Plan

Strategy 13. Verbal Warning

Following identification of deficiencies during an inspection, the inspector will issue a Verbal Warning to the owner or operator. Educational materials may also be supplied at this time to facilitate understanding of the construction storm water program, regulations, and purpose.

Following issuance of the Verbal Warning:

- If the deficiencies can be corrected at the time of the inspection, no further action is required.
- If the deficiencies cannot be corrected at the time of the inspection but could result in a potential illicit discharge, the site will be scheduled for re-inspection. A Notice of Violation may be issued at the inspector's discretion.
- If the deficiencies have resulted in an illicit discharge of sediment, trash, or other pollutants, a Notice of Violation will be issued by the Engineering Department.

Issuance of a Verbal Warning will be noted on the BMP Inspection Form.

Evaluation Criteria: The City will report the number of re-inspections conducted at deficient sites by City employees during the reporting period.

Strategy 14. Notice of Violation

A written Notice of Violation (NOV) will be issued by the Engineering Department to the owner or operator of a noncompliant construction site under the following conditions:

- Construction sites with observed deficiencies that have resulted in a discharge of pollutants
- Construction sites that have been re-inspected following a Verbal Warning and the deficiencies noted at the time of the Verbal Warning have not been corrected

A Notice of Violation may be issued at the inspector's discretion to construction sites with observed deficiencies that could potentially result in a non-compliant discharge, but have not yet caused a release of sediment or other pollutants.

The NOV will include the following information, at a minimum:

1. Date and time the deficiencies were observed
2. Description of the identified deficiencies
3. Remediation schedule
4. Re-inspection date

Evaluation Criteria: The City will report the number of NOVs issued to noncompliant construction sites during the reporting period.

Strategy 15. Stop Work Order

Article VI Sec. 12-334 of the Huntsville Code of Ordinances authorizes the city engineer to issue a stop work order with regard to any grading or other land disturbance activity that is being done contrary to the provisions of the ordinance or in a dangerous or unsafe manner. Such notice shall be in writing, shall be delivered to the owner of the property, his agent, or the person doing the work, and shall state the conditions under which work may be resumed.

Evaluation Criteria: The City will report the number of stop work orders issued to noncompliant construction sites during the reporting period.

Strategy 16. Citation

Article VI Sec. 12-334 of the Huntsville Code of Ordinances authorizes the city engineer, or an employee of her department designated by her, to issue a citation to any person found to be in violation of the ordinance or the Huntsville Stormwater Manual. The citation shall order the person to appear in the municipal court at a date and time to answer the charges.

Evaluation Criteria: The City will report the number and types of citations issued to noncompliant construction sites during the reporting period.

7.2.6 Enforcement Tracking

Strategy 17. Document Enforcement Actions

When a Notice of Violation is issued, a case log detailing pertinent information will be created. Throughout the problem investigation and corrective action activities, information related to the incident or property in question will be documented in the case log.

Documentation of enforcement actions will include the following, at a minimum:

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 or violations are not resolved in a timely manner
f. Accompanying documentation of enforcement responses (e.g. notices of non-compliance, notices of violations, etc.)
g. Any referrals to different Departments or Agencies
h. Date the violation was resolved

Evaluation Criteria: The City will maintain records of enforcement actions. The City will report the number of parties against which enforcement action is taken during the reporting period.

7.2.7 Educational Resources

Strategy 18. Website

Educational resources will be made available to construction site operators using the Huntsville MS4 webpage. The webpage will provide links to the most recent Alabama Handbook, the *City of Huntsville Stormwater Management Manual*, and the most recent issuance of the Construction NPDES General Permit ALR100000.

Evaluation Criteria: The City will report the number of out-clicks to the educational resources from the Huntsville MS4 webpage during the reporting period.

Strategy 19. Materials Provided with Enforcement Actions

Educational materials may be provided with written Notices of Violation or other enforcement actions. The educational materials may include information on City ordinances, state regulations, and/or the appropriate use, installation, and maintenance of erosion and sediment controls.

Evaluation Criteria: The City will report the types of educational materials provided with enforcement actions during the reporting period.

7.3 Responsible Parties

The **Engineering Department** and the **City Engineer** are responsible for implementing the Construction Site Storm Water Runoff Control Program.

The **Communications Department** is responsible for reporting the appropriate website data for the reporting period to the Natural Resources Department for inclusion in the Annual Report.

The **GIS Department** is responsible for mapping the inventory of active construction sites. The GIS Department will provide the updated map of active construction sites annually for inclusion in the Annual Report.

The **Natural Resources Department** is responsible for compiling the required data, as received by the participating departments, for inclusion in the Annual Report. Natural Resources is also responsible for coordinating with the Communications Department to maintain the Huntsville MS4 webpage.

8.0 Post-construction Storm Water Management

8.1 Rationale

Post-construction runoff can significantly impact a water body by increasing the type and quantity of pollutants in storm water runoff and by increasing the quantity of water delivered to the water body during storms. As runoff flows over areas altered by development, it collects sediment and chemicals such as oil, grease, pesticides, heavy metals, and nutrients. Instead of infiltrating, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff are delivered to the nearest receiving water. Both impacts can be mitigated by proper post-construction planning.

The City's Post-construction Storm Water Management Program is primarily designed to minimize the discharge of pollutants from post-construction storm water discharges from new development and redevelopment projects. The program is intended to:

- Ensure that post-construction runoff mimics pre-construction hydrology of the site;
- Remove suspended solids and other pollutants associated with activities occurring during and after development;
- Encourage the use of Low Impact Development and Green Infrastructure techniques in managing post- construction storm water control;
- Decrease the erosive potential of increased runoff volumes and velocities associated with development; and,
- Preserve natural systems including in-stream habitat, riparian areas, and wetlands.

8.2 Strategies

8.2.1 Legal Authority and Design Standards

Strategy 1. Post-Construction Storm Water Management Ordinance

Prior to **September 30, 2020**, the City will develop an ordinance to address post-construction runoff from new development and redevelopment projects.

The ordinance shall:

- Formally adopt guidelines for Post-Construction BMP standards including structural and non-structural BMPs.

- Establish general performance criteria for post-construction storm water management, including the requirement that post-construction runoff mimic preconstruction hydrology of the site.
- Establish general design criteria for post-construction BMPs, including the requirement that a 1.1 inch rainfall over a 24-hour period, preceded by a 72-hour antecedent dry period, be the basis for the design and implementation of post construction BMPs to the maximum extent practicable.
- Encourage the implementation of Low-Impact Development and Green Infrastructure practices as part of the planned post-construction BMPs.
- Establish requirements for post-construction storm water management plans.
- Establish procedures for plan submittal, review, and approval.
- Require the submittal of an "as-built" certification of the post-construction BMPs within 120 days of completion.
- Establish methods by which the City will require long-term operation and maintenance of post-construction BMPs.
- Provide authority for City personnel to inspect post-construction BMPs, both during construction and following completion.
- Require the performance of post-construction inspections and the maintenance of inspection and maintenance records.
- Establish enforcement procedures to address non-compliant plans and sites.

Evaluation Criteria: The City will annually evaluate the Post-Construction Storm Water Management Ordinance to ensure that post-construction BMPs within the MS4 are being correctly planned, properly installed, and adequately maintained. The evaluation will consider the results of the plan reviews and inspections conducted during the reporting period to determine if the ordinance should be updated.

The City will include a copy of or a link to the most recent version of the Post-Construction Storm Water Management Ordinance with each Annual Report once adopted.

Strategy 2. Storm Water Manual Revisions

The *City of Huntsville Stormwater Management Manual* is the document used to establish regulations and technical guidelines for developers, landowners, builders, architects, engineers, and others involved in development activities. It details policy, permitting

requirements, design regulations, and technical information for storm water activities. It was first issued in 1991 and was amended in 1991 and 1994.

- Chapter 3 *Regulations for Facility Design and Flood Plains* outlines design storm return periods for open channels, culvert and bridges, and storm sewers for roads and details submittal requirements for drainage plans.

- Chapter 9 *Storage System Hydraulics* details design criteria for retention and detention facilities.

The City will evaluate the *Stormwater Management Manual* for compliance with the most recent issuance of Phase I MS4 permit ALS000005. Following the evaluation, the City will revise the Manual to incorporate the requirements of the Phase I permit and the MS4 SWMPP. The City will also consider incorporating the most recent version of the *Low Impact Development Handbook for the State of Alabama* into the Manual.

Following the initial revisions, the *Stormwater Management Manual* will be reviewed annually. The results of Post-Construction BMP Plan reviews will be considered during the review, as will inspection results and public comments.

Evaluation Criteria: A brief summary of changes to the *City of Huntsville Stormwater Management Manual* will be included in the Annual Report. If no changes are made during the reporting period, that will be noted.

Strategy 3. Design Basis for Comparing Pre- and Post-Construction Flows

The *City of Huntsville Stormwater Management Manual* currently requires the post-development and pre-development peak flow rate be equal, using the 10-year, 24-hour storm as a design basis.

Part B.5.a(2) of the Phase I permit requires that post-construction runoff mimic pre-construction conditions using a 1.1-inch rainfall over a 24-hour period, preceded by a 72-hour antecedent dry period for the basis for the design and implementation of post construction BMPs.

The Manual will be revised to incorporate the design requirement specified in the Phase I permit. The requirement will apply to all new construction and redevelopment undertaken after **October 1, 2020**.

Evaluation Criteria: The City will report the effective date of the revised *City of Huntsville Stormwater Management Manual* in the Annual Report.

Strategy 4. Reduce Post-Construction Runoff Volume

The Post-Construction Storm Water Management Ordinance will require that developers implement design strategies for new development and redevelopment occurring after

October 1, 2020 to reduce the discharge of pollutants and ensure that post-construction runoff mimics the pre-construction hydrology. Appropriate design strategies will be included in the revised *City of Huntsville Stormwater Management Manual*, and may include both structural and non-structural BMPs.

Design strategies may include, but are not limited to:

- Minimizing impervious surfaces
- Providing vegetated buffers
- Detention ponds
- Retention ponds
- Bioswales
- Rain gardens
- Pervious pavement

Evaluation Criteria: The City will report the number of Post-Construction Best Management Practices Plans approved during the reporting period.

Strategy 5. Encourage Low-Impact Development/Green Infrastructure Practices

The City will encourage the implementation of Low-Impact Development and Green Infrastructure practices for new development and redevelopment as part of the planned post-construction BMPs to reduce the discharge of pollutants.

The revised *City of Huntsville Stormwater Management Manual* may incorporate the most recent version of the *Low Impact Development Handbook for the State of Alabama* and may provide more specific guidance for City-approved LID practices.

Evaluation Criteria: The City will include a summary of Low-Impact Development and Green Infrastructure practices included in Post-Construction Best Management Practices Plans during the reporting period.

8.2.2 Plan Review and Oversight

Strategy 6. Require Post-Construction BMP Plan Submittal

The Post-Construction Storm Water Management Ordinance will include the requirement that developers submit a Post-Construction Best Management Practices Plan to the City prior to the construction of new development or redevelopment. The specific criteria for Post-Construction Best Management Practices Plans will be established in the *City of Huntsville Stormwater Management Manual*. Approval of the plan by the Engineering Department will be required prior to the issuance of a grading permit.

Evaluation Criteria: The City will report the number of Post-Construction Best Management Practices Plans approved during the reporting period.

Strategy 7. Plan Review Procedures

Prior to the issuance of the grading permit, the Engineering Department will review the Post-Construction Best Management Practices Plan submitted by the applicant. The plan will be reviewed for:

1. Compliance with the design criteria established in the ordinance and the *City of Huntsville Stormwater Management Manual*
2. Compliance with the BMP standards adopted in the *City of Huntsville Stormwater Management Manual*
3. Consideration of Low-Impact Development/Green Infrastructure strategies
4. Effectiveness of the selected BMPs
5. Details on methods selected for permanent stabilization
6. Inclusion of a long-term maintenance agreement
7. Provisions for annual inspections and record-keeping

If the reviewed plan is determined to meet the applicable criteria, the plan will be approved in writing.

Evaluation Criteria: Based on the results of plan reviews conducted during the reporting period, the City will evaluate the plan review criteria to determine if additional metrics are necessary or if further clarification is needed for the existing metrics.

Strategy 8. Require As-Built Certification

The Post-Construction Storm Water Management Ordinance will include the requirement that the developer submit an as-built certification of the post-construction BMPs. A Certificate of Occupancy will not be issued for the project until the as-built certification is submitted and all post-construction BMPs are determined to be in compliance.

The revised *City of Huntsville Stormwater Management Manual* will identify the specific information required to be included in the as-built certification. Such information may include, but is not limited to:

- As-built plans, certified by a licensed design professional, showing final design specifications for all post-construction storm water management practices
- Calculations verifying the performance of the constructed practice

- Certification form or letter

Evaluation Criteria: The City will report the number of as-built certifications submitted for post-construction storm water controls during the reporting period.

Strategy 9. Final Inspection

To ensure that post-construction BMPs are installed in accordance with the approved plans, the Engineering Department will conduct an inspection following construction. The inspection will evaluate the post-construction BMPs for compliance with the approved plans.

If an inspected BMP is determined to be out of compliance, the City will require the owner to modify the BMP to meet the approved plans. Additional inspections will be conducted as necessary to determine if the required modifications have been made. A Certificate of Occupancy will not be issued for the project until the as-built certification is submitted and all post-construction BMPs are determined to be in compliance.

Evaluation Criteria: The City will report the number of post-construction BMPs installed and the number of final inspections conducted on post-construction BMPs during the reporting period.

8.2.3 Long-Term Operation and Maintenance

Strategy 10. Require Legal Agreement for Long-Term Maintenance

The Post-Construction Storm Water Management Ordinance will include measures requiring the long-term operation and maintenance of post-construction BMPs. The ordinance will require at least one of the following agreements:

- The developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; or
- A legally-enforceable agreement that assigns permanent responsibility for maintenance of post-construction BMPs.

Evaluation Criteria: Prior to the end of each reporting period, the City will update the inventory of post-construction BMPs within the MS4. The City will include the post-construction controls inventory in the Annual Report.

Strategy 11. Inventory of Post-Construction Controls

The City will maintain an inventory of post-construction BMPs within the MS4, both City-owned and privately-owned. Following the issuance of the grading permit, the Engineering Department will notify the GIS Department that new post-construction BMPs

are planned. The notification will include the location and type of BMPs. The GIS Department will update the inventory of post-construction BMPs within the MS4.

Following the final inspection and approval of post-construction BMPs, the information entered into the post-construction controls inventory will be reviewed for accuracy.

Evaluation Criteria: The City will include the post-construction controls inventory in the Annual Report.

Cross-Reference: Section 4.2, Strategy 1

Strategy 12. Annual Inspections

The Post-Construction Storm Water Management Ordinance will provide for annual inspections of post-construction BMPs approved after **October 1, 2020**. The inspections will be performed to confirm that the post-construction BMPs are functioning as designed.

Documentation of post-construction control inspections shall include, at a minimum:

a. Facility type

b. Inspection date

c. Name and signature of inspector

d. Site location

e. Owner/operator information (name, address, phone number, and email)

f. Description of conditions of BMPs, including but not limited to the following:
   - Vegetation and soils
   - Inlet and outlet channels and structures
   - Embankments, slopes, and safety benches
   - Spillways, weirs, and other control structures
   - 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 must be corrected

i. Maintenance agreements for long-term BMP operations and maintenance

Should a routine inspection of any post-construction BMP identify a maintenance issue, the responsible party will perform all necessary maintenance or repairs. Additional inspections will be conducted as necessary to determine if the required repairs have been made.

Privately-Owned/Maintained Controls

Owners of post-construction BMPS will be required to inspect all owned post-construction BMPs annually, at a minimum, and document that the BMPs are properly maintained and functioning as designed. Inspections will be conducted by individuals familiar with the operation of said BMPs.

Inspections will be documented and are required to be maintained by the owner/responsible party for a minimum period of three years from the date of inspection or maintenance, and will be made available to the City and/or ADEM upon request.

City-Owned/Maintained Controls

The Engineering Department will inspect City-owned or managed post-construction BMPs within the Huntsville MS4 annually. The City may also inspect non City-owned post-construction BMPs periodically at its discretion. Inspection records will be maintained for a minimum period of three years from the date of inspection or maintenance, and will be made available to ADEM upon request.

Evaluation Criteria: The City will report the number of inspections performed on City-owner or maintained structures and the number of corrective actions taken regarding deficient post-construction BMPs during the reporting period.

Cross-Reference: Section 4.2, Strategy 2

8.2.4 Enforcement and Abatement

Strategy 13. Procedures to Address Non-Compliant Post-Construction BMPs

The Post-Construction Storm Water Management Ordinance will include enforcement procedures for addressing owners/responsible parties of post-construction BMPs that fail to meet the design, operation, or maintenance requirements of the ordinance. Enforcement procedures to be considered in the ordinance may include:

- Denial of plan approval
- Denial of Certificate of Occupancy
- Warning notices
- Notices of violation
- Citations
- Stop work orders
- Emergency abatement
- Injunctive relief and/or civil remedies

Evaluation Criteria: The City will maintain records of enforcement actions. The City will report the number of parties against which enforcement action is taken during the reporting period.

Strategy 14. Enforcement Tracking

When enforcement actions are initiated, a case log detailing pertinent information will be created. Throughout the problem investigation and corrective action activities, information related to the incident or property in question will be documented in the case log.

Documentation of enforcement actions will include the following, at a minimum:

a. Name of owner/responsible party
b. Location
c. Description of violation
d. Required schedule for returning to compliance
e. Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner
f. Accompanying documentation of enforcement responses (e.g. notices of non-compliance, notices of violations, etc.)
g. Any referrals to different Departments or Agencies
h. Date the violation was resolved

Evaluation Criteria: The City will maintain records of enforcement actions. The City will report the number of parties against which enforcement action is taken during the reporting period.

8.3 Responsible Parties

The **Engineering Department** is responsible for establishing design criteria for post-construction BMPs, drafting a Post-Construction Storm Water Management Ordinance, reviewing submitted Post-Construction Storm Water Best Management Practices Plans, reviewing long-term maintenance agreements for privately-owned controls, notifying the GIS department when controls are added, and performing inspections of City-owned or maintained post-construction BMPs.

The **GIS Department** is responsible for updating the inventory post-construction BMPs. The GIS Department will provide the updated map the inventory post-construction BMPs annually for inclusion in the Annual Report.

The **Natural Resources Director** is responsible for compiling the required data, as received by the participating departments, for inclusion in the Annual Report.

9.0 Spill Prevention and Response

The objective of the Spill Prevention and Response Program is to prevent, contain, and respond to spills which might discharge pollutants to the MS4. To evaluate the success of the program and aid in preparing the required Annual Reports, evaluation criteria have been established for each strategy.

9.1 Rationale

Spill and leaks of pollutants pose a significant threat to storm water. Potential sources of spills within the Huntsville MS4 include:

- Bulk petroleum storage
- Exterior storage of equipment or materials
- Product transfer
- Accidents
- Road and street maintenance
- Application, storage, transport, and disposal of chemicals

Spill prevention consists of practices to reduce the risk of materials being released. Spill response consists of the actions taken to prevent spilled or leaked materials from reaching waterways or impacting the environment. The City's Spill Prevention and Response program will address both aspects.

9.2 Strategies

9.2.1 Spill Prevention

Strategy 1.	**Industrial Facility BMP Plan Approval**

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998 amending Chapter 21 of the Code of Ordinances, City of Huntsville, Alabama *Article III Storm Sewers*. Article III, Division 2 establishes regulations for NPDES compliance for storm sewers. Subdivision II establishes procedures for Best Management Practices (BMP) Approval.

Section 21-351 requires industrial and high-risk facilities to submit an application for BMP plan approval and associated fee to the Natural Resources Department. The BMP approval must be renewed every three years. Section 21-331 defines a high-risk facility as "*municipal landfills; other treatment, storage or disposal facilities for municipal waste (e.g., transfer stations, incinerators, etc.); and hazardous waste treatment, storage, disposal and recovery facilities*." The current **Application for BMP Plan Approval** form is included in Appendix E.

As part of the Industrial Storm Water Runoff program, the Natural Resources Department will review submitted BMP plan applications and issue BMP Plan approvals as detailed in Section 21-352 of the ordinance. The application information will be used to update mapping, schedule inspections, and document NPDES permit status.

Evaluation Criteria: The City will report the number of BMP plan applications approved during the reporting period. The City will also report the number of new industrial facilities that were approved during the reporting period.

Cross-Reference: Section 13.2.1, Strategy 1

Strategy 2. Industrial Facility Inventory

As part of the Industrial Storm Water Runoff program, the City will maintain an inventory of industrial facilities within the City limits. The inventory may be used to prioritize inspections, evaluate discharge types within watersheds, and identify major outfalls.

Evaluation Criteria: The City will report the number of inventoried industrial facilities in the City limits during the reporting period.

Cross-Reference: Section 13.2.1, Strategy 3

Strategy 3. Industrial Facility Inspections

As detailed in the Industrial Storm Water Runoff program, identified non-permitted industrial facilities and high-risk commercial facilities will be inspected periodically by the Natural Resources Department. The inspections will include a review of the facility's storm water pollution prevention measures to identify potential or ongoing pollutant discharges.

Evaluation Criteria: The City will report the number of industrial facilities inspections conducted during the reporting period.

Cross-Reference: Section 13.2.2, Strategy 4

Strategy 4. SPCC Plans for Qualifying Municipal Facilities

A Spill Prevention Control and Countermeasures (SPCC) Plan is required by Title 40, Part 112 of the Code of Federal Regulations (40 CFR 112) for facilities with an aggregate aboveground oil storage capacity greater than 1,320 gallons. Facilities with an aggregate underground storage capacity greater than 42,000 gallons must also develop an SPCC Plan.

The City will maintain and implement an SPCC Plan at each municipal facility with an aggregate oil storage capacity exceeding the storage thresholds. Oil storage capacity will be determined by totaling the maximum volume of each container equal to or greater than 55 gallons. The capacity of oil-filled equipment must also be included (e.g., hydraulic systems, lubricating systems, gear boxes, coolant systems, transformers, circuit breakers, and electrical switches).

The municipal facility SPCC Plans will be reviewed annually and updated in accordance with the requirements of 40 CFR 112.

Evaluation Criteria: The City will report the number of municipal facilities requiring SPCC Plans and the date each was last updated.

Strategy 5. Standard Operating Procedures for Municipal Operations

As part of the Spill Prevention/Good Housekeeping for Municipal Operations program, the City will develop Standard Operating Procedures (SOP) detailing good housekeeping practices to be employed during municipal operations. The SOPs will include spill prevention measures for each operation.

The SOPs will be developed by **September 30, 2019** and will be implemented at the appropriate municipal facilities no later than **September 30, 2020**. Once implemented, the SOPs will be evaluated each year by September 30. A summary of proposed changes will be included in the Annual Report.

Evaluation Criteria: The City will report completion of the SOPs in the 2018-2019 Annual Report. The City will report the results of the annual evaluation of the SOPs in each subsequent Annual Report.

Cross-Reference: Section 10.2.6, Strategy 18

Strategy 6. Training of Non-HAZMAT Municipal Employees

Appropriate City personnel will undergo annual training on the prevention of and appropriate response to spills or releases, as part of the Pollution Prevention/Good Housekeeping for Municipal Operations program.

Evaluation Criteria: The City will report the dates municipal employees underwent spill prevention and response training, the number of attendees, and the departments represented.

Cross-Reference: Section 10.2.8, Strategy 21

9.2.2 Spill Response

Strategy 7. HAZMAT Spill Response

The City of Huntsville Fire and Rescue Department Special Operations Division Hazardous Materials Unit responds to hazardous material releases, both within the City limits and regionally. Spills of hazardous materials are managed by the HAZMAT team, supported by Emergency Management and the Huntsville Police Department.

The HAZMAT team is based at Station 5 (2503 University Dr. NW) and Station 15 (4801 Sparkman Dr. NW), and is equipped with a decontamination truck, technical rescue units, and an entry truck. The team is comprised of approximately 55 members, all of which are Technician-Level HAZMAT certified.

Evaluation Criteria: The City will report the number of spill response actions taken within the City limits by the Huntsville Fire Department HAZMAT team during the reporting year.

Strategy 8. HAZMAT Spill Response Map

The Huntsville Fire Department Special Operations Division maintains a record of HAZMAT response incidents for submittal to EMA. The record includes date, time, and coordinates of incidents requiring HAZMAT response.

The Special Operations Division will submit a copy of the incident record to the GIS Department. The GIS Department will maintain a map of spill locations using the City GIS. Trends in spill types or locations will be evaluated to determine if additional education or resources are needed in specific areas.

Evaluation Criteria: The map of spill response incidents will be updated annually. The most recent spill response map will be included in the Annual Report.

Strategy 9. Training of HAZMAT Responders

Members of the Hazardous Materials Unit will undergo annual training on hazardous materials response.

Huntsville HAZMAT responders are HAZMAT Technician-Level certified. OSHA requires HAZMAT technicians to receive a minimum of 24 hours per year of HAZMAT training to maintain certification.

Evaluation Criteria: The City will report the number of personnel trained in hazardous materials response.

Strategy 10. Spill Response at Municipal Facilities

The City will develop Standard Operating Procedures (SOPs) for specific municipal operations. The SOPs will include information on spill response and spill reporting for small spills at municipal facilities.

The SOPs for Municipal Operations will be reviewed annually and updated if necessary.

Evaluation Criteria: The City will report the number of spills reported at municipal facilities during the reporting period.

Cross-Reference: Section 10.2.6, Strategy 18

9.3 Responsible Parties

The **Fire Department** is responsible for corrective actions regarding hazardous spill response and for providing the incident record to the GIS Department. The Fire Department is also responsible for ensuring HAZMAT team members are trained and certified for hazardous materials response.

The **GIS Department** is responsible for preparing and updating the map of HAZMAT spill response incidents.

The **Natural Resources Department** is responsible for approving BMP plan applications, inspecting industrial facilities, coordinating the annual municipal employee training, and compiling the required data from the participating departments for inclusion in the Annual Report.

10.0 Pollution Prevention/Good Housekeeping for Municipal Operations

10.1 Rationale

The City will develop and utilize BMPs designed to minimize pollution related to municipal operations and maintenance. These BMPs are intended to address storm water pollution from nutrients, sediments, petroleum products, and other common pollutants.

10.2 Strategies

10.2.1 Municipal Facilities Inventory

Strategy 1. Municipal Facilities Inventory

The City will maintain an inventory listing all municipal facilities, including municipal facilities that have the potential to discharge pollutants via storm water runoff. The inventory will be updated annually.

The following municipal facilities have been identified as having the potential to contribute pollutants to storm water:

Table 10-1 Municipal Facilities with Pollutant Potential

Facility	Address	Type
General Services	615 Washington	Municipal Operations
Fleet	2739 Johnson	Municipal Operations
Public Works	4209 E Scrimsher	Municipal Operations
Sanitation	4205 E Scrimsher	Municipal Operations
Landscape / OGT	3242 Leeman Ferry SW	Municipal Operations
Water Pollution Control	1800 Vermont SW	Municipal Operations
Firing Range	325 Wall Triana	Police Training / Public Use
Traffic Control	2100 Clinton W	Municipal Operations
Huntsville Landfill	4100 Leeman Ferry SW	Municipal Landfill
Animal Services	4950 Triana SW	Municipal Operations

Evaluation Criteria: The City will report the number of municipal facilities that have the potential to discharge pollutants via storm water runoff.

10.2.2 Trash Prevention

Strategy 2. Street Sweeping Program

Landscape Management currently operates six street sweepers. These are used on state right-of-ways and major thoroughfares for the removal of litter and debris. The street sweepers are operated on US Highway 431, US Highway 231, Interstate 565, and State Route 255 four times per year.

Evaluation Criteria: The City will report the number of lane miles swept during the Reporting Period.

Strategy 3. Waste Receptacles in Public Areas

The City currently provides waste receptacles at City-owned parks, greenways, cemeteries, and downtown Huntsville. The waste receptacles are maintained by Operation Green Team and Landscape Management.

Evaluation Criteria: The City will report if additional receptacles were required due to increased littering at the above-listed City-managed properties during the reporting period.

Strategy 4. Operation Green Team Law Enforcement Officer

Operation Green Team currently employs one law enforcement officer. The primary function of this officer is to ticket waste haulers that are not appropriately covered. Tickets are also issued for other litter violations such as landscapers blowing debris into roads or citizens throwing trash out of vehicles.

Evaluation Criteria: The City will report the number of tickets issued by the Operation Green Team officer during the reporting period.

Strategy 5. Prevention through Additional Enforcement

Section 22-36(a) of the Huntsville City Code of Ordinances states that, "It shall be unlawful for any person to throw, dump, place, leave or deposit litter, refuse, paper, rubbish, debris, brush, tree removal debris, boxes, tools, scrap iron, machinery, construction or demolition waste, scrap or waste material, or other trash or debris on public property, including, but not limited to, a city right-of-way, road other public thoroughfare, or on private property within the city, irrespective of whether such private property is owned by such person; however, the owner or person in control of such private property may utilize authorized private containers in such a manner that such material will be prevented from being carried or deposited by the elements onto any street, sidewalk or other public place or private property; however, such material shall be permitted on such public or private property when it is properly place for collection."

Section 12-172 of the Huntsville City Code of Ordinances states that, "It shall be unlawful and a violation of this article for any person or entity, including without limitation the owner, tenant or person in control of or charge of any premises, to fail to maintain the premises free from litter and garbage unless the litter and garbage is containerized and stored in such a manner as to prevent it from being blown, deposited or otherwise scattered by the elements, animals, birds or any other means."

Section 22-41 of the Huntsville City Code of Ordinances states that, "(a) It shall be unlawful for any person to throw, sweep, dump or otherwise deposit in or around any public lake, stream or body of water of the city any solid waste or any other article or material that would tend either to impede the flow of water or clog such bodies of water or otherwise detract from the environmental quality or aesthetics of the area. (b) It shall be unlawful for any person to throw, drop, dump or deposit litter or any foreign material in any fountain, pond, lake, stream, bay or any other body of water in or adjacent to a public park or elsewhere within the city."

Landscape Management is responsible for responding to complaints regarding possible violations of the trash and litter ordinances.

Evaluation Criteria: The City will report the number of litter enforcement actions undertaken during the reporting period.

Strategy 6. Prevention through Waste Reduction Practices

The City will consider and recommend waste reduction practices at municipal facilities and promote recycling and other disposal alternatives within the MS4. The City may consider automatic hand dryers to reduce paper waste, tap water filters to reduce plastic bottles, and increasing the number of recycling containers available at municipal facilities.

Evaluation Criteria: The City will report the types of waste reduction practices and disposal alternatives initiated at municipal facilities during the reporting period.

Strategy 7. Prevention through Construction Site Inspections

Construction sites will be inspected periodically by the Engineering Department as part of the Construction Site Storm Water Runoff Control program.

Part III.A of the Alabama Construction General Permit (ALR100000) requires that the permitted construction site install BMPs to minimize the exposure of building materials, building products, construction wastes, trash, and landscape materials to precipitation and storm water. During the construction site inspections, City personnel will evaluate the management of construction-related materials, waste, and trash.

If necessary, the City will initiate enforcement actions to ensure that construction-related materials are stored properly and that construction waste and trash are collected on-site and disposed of properly.

Evaluation Criteria: The City will report the number of construction site BMP inspections performed by City personnel during the reporting period.

Cross-Reference: Section 7.2.4, Strategies 10-12

10.2.3 Trash Removal

Strategy 8. Direct Removal of Trash from Waterbodies

Trash will be removed from the MS4 by active measures, including, but not limited to:

- Manual skimming using nets
- Wading into streams or ditches to remove trash
- Using a boat to reach trash in deep water

Evaluation Criteria: The City will report the estimated quantity of trash removed from the MS4 during the reporting period.

Strategy 9. Adopt-a-Mile Program

Operation Green Team coordinates the City of Huntsville Adopt-a-Mile and Adopt-a-Park programs. Volunteer groups apply to sponsor parks or road sections for a minimum of one year, and Operation Green Team provides the necessary supplies, including trash bags, can catchers, gloves and safety vests for each clean-up.

Evaluation Criteria: The City will report the number of miles and parks sponsored during the reporting period.

Cross-Reference: Section 5.2.4, Strategy 12

Strategy 10. Inmate Labor Program for Litter Removal

The Huntsville Police Department maintains an Inmate Labor Program. As part of the program, inmates perform trash and litter removal along public roadways in coordination with Operation Green Team. Operation Green Team chooses the location and provides trash bags.

Evaluation Criteria: The City will report the number of bags of litter and trash collected by inmates during the reporting period.

10.2.4 Event Trash Management

Strategy 11. Special Events Permitting

A Special Event Permit is required for any activity that might disrupt normal traffic flow of vehicles or pedestrians on city streets, rights of way, or sidewalks. A Special Event Permit is also required to reserve a City park for an organized event that might disrupt normal use of the park.

Page 2 of the Special Event Permit application directs the applicant to Operation Green Team for events that will generate litter or garbage. Operation Green Team provides information to event organizers on trash pick-up and disposal. Event organizers can also request recycle bins that can be checked out through Operation Green Team. Page 6 of the Special Event Permit application requires the applicant to describe the provisions in place for cleanup of the site after the event.

The City currently processes applications for Special Events Permits through the Police Department's Special Events team. The Police Department's Special Events team ensures applications meet all criteria for approval, including city laws and Article VI. *Organized Events* of the Huntsville Code of Ordinances.

Evaluation Criteria: The City will report the number of Special Event Permits issued during the reporting period. The City will also report the number of recycle bins checked out by event organizers during the reporting period.

Strategy 12. Special Events Meeting

Periodically, appropriate City departments meet to discuss upcoming special events. These meetings ensure that all departments are aware and knowledgeable of the event and that all permit requirements have been met, including methods of trash removal and disposal.

Evaluation Criteria: The City will report the number of Special Event Permits issued during the reporting period.

Strategy 13. Temporary Protection and/or Trash Prevention at Public Events

For City-managed events, Operation Green Team or Landscape Management will provide trash prevention measures.

For private events, the City will include the requirement that the event organizers provide temporary protection or preventative measures where feasible.

Trash prevention measures may include, but are not limited to:

- Placement of additional trash receptacles in the event area
- City personnel operating during the event to collect litter and trash

Temporary protection measures may include, but are not limited to:

- Inlet screens
- Drain bags
- Ditch wattles
- Screens or fencing at culverts
- Construction fencing to prevent access to sensitive areas

Evaluation Criteria: The City will report the number of event permits issued during the reporting period. The City will also report the number of City-managed events held during the reporting period.

Strategy 14. Event Trash Receptacles

For City-managed events, trash receptacles and trash collection services will be provided by Operation Green Team, Landscape Management, or the contracted venue.

For privately-managed public events, the event organizer is responsible for contracting trash pick-up. Event organizers can check-out recycle bins from Operation Green Team. It is the responsibility of the event organizer to dispose of trash and recyclables.

Evaluation Criteria: The City will report the number of Special Event Permits issued during the reporting period. The City will also report the number of City-managed events held during the reporting period.

Strategy 15. Prompt Removal of Event Trash

Section 23-203(a)(2) of the Huntsville City Code of Ordinances states that "*Immediately following the termination of an organized event, the event organizer shall be responsible for restoring the public area used for the event and public property damaged by the event to its condition prior to the commencement of the event, or where public property is damaged beyond repair replacing it; where such restoration or replacement is necessitated by event conduct.*"

Part II.B.7.a(3)(b) of the Phase I permit requires that the disposal of trash receptacles, cleanup of catch basins, and cleanup of the event area be completed within one business day.

The City will require that event organizers complete the event cleanup within one business day of the event.

For some City-managed events, trash pick-up takes place before, during, and immediately after the event by Operation Green Team or Landscape Management.

Evaluation Criteria: The revised Special Event Permit will be included in the 2019-2020 Annual Report. The City will report the number of event permits issued during the reporting period.

10.2.5 Identify and Mitigate High-Trash Areas

Strategy 16. Identify High-Trash Areas

At the end of each reporting period, Operation Green Team will determine which areas are expected to generate higher amounts of trash. High-trash areas may be determined by the amount of litter collected, the number of public complaints received, or the number of citations issued for littering. The GIS Department will identify the selected high-trash areas on the MS4 map, and include a map showing the selected areas with the Annual Report.

The City will provide additional trash receptacles or alternative BMPs in the identified areas as needed.

Evaluation Criteria: The Annual Report will include the updated map of high-trash areas and a brief description of the measures taken to mitigate litter and trash in those areas.

Strategy 17. Waste Receptacles in Homeless Camps

Operation Green Team currently provides waste receptacles in areas where higher numbers of homeless individuals are gathered. The waste receptacles are maintained by the Sanitation Department. Operation Green Team also provides free trash bags to homeless camps and advocacy groups.

Evaluation Criteria: The City will report the approximate number of waste receptacles provided in these areas during the reporting period.

10.2.6 Standard Operating Procedures

Strategy 18. Good Housekeeping Standard Procedures

The City will develop Standard Operating Procedures (SOP) detailing good housekeeping practices to be employed during municipal operations that may include, but are not limited to:

- Equipment washing
- Street sweeping
- Maintenance of municipal roads owned, operated, or under the responsibility of the City
- Storage and disposal of chemicals and waste materials (including PHF)

- Vegetation control, cutting, removal, and disposal of the cuttings
- Vehicle fleets/equipment maintenance and repair
- External building maintenance
- Materials storage facilities and storage yards

The SOPs will be developed by **September 30, 2019** and will be implemented at the appropriate municipal facilities no later than **September 30, 2020**.

Once implemented, the SOPs will be evaluated each year by September 30. A summary of proposed changes will be included in the Annual Report.

Evaluation Criteria: The City will report completion of the SOPs in the 2018-2019 Annual Report. The City will report the results of the annual evaluation of the SOPs in each subsequent Annual Report.

Cross-Reference: Section 9.2.1, Strategy 5

Strategy 19. Pesticide, Herbicide, and Fertilizer Standard Procedures

Pesticide applicators in the State of Alabama are required to obtain applicator permits through the Department of Agriculture and Industries.

NPDES General Permit ALG870000 covers the application of pesticides for four use patterns:

a) Mosquito and other flying insect control
b) Weed and algae pest control
c) Animal pest control in water and at water's edge
d) Forest canopy or other area-wide pest control

General NPDES Permit ALG870000 requires the development of a Pesticide Discharge Management Plan (PDMP) outlining Standard Operating Procedures for PHF application, storage, disposal, and equipment maintenance.

All aquatic Pesticide, Herbicide, and Fertilizer (PHF) application within the City of Huntsville is contracted to commercial applicators. This contractor applies herbicide to blue-line streams within the City. Landscape Management will require the contracted applicators to provide proof of current applicator certifications and NPDES permit coverage.

Evaluation Criteria: The City will review the certifications and permits provided by pesticide contractors. The results of the review will be included in the Annual Report.

Cross-Reference: Section 11.2.3, Strategy 7

10.2.7 Inspection Program

Strategy 20. Inspection of Municipal Facilities

Municipal facilities will be evaluated to determine which facilities have operations with the potential to contribute pollutants to storm water runoff. The evaluation will consider the following:

- Types and amounts of chemicals stored at the facility
- Types and capacities of tanks, totes, or drums at the facility
- Outfall locations and types (e.g., ditch, culvert, pipe, etc.)
- Exterior operations at the facility (e.g., equipment washing, equipment fueling, etc.)

Municipal facilities with identified pollution potential will be inspected annually for good housekeeping practices and compliance with the developed SOPs. The **Stormwater Compliance Evaluation Inspection** form is included in Appendix E.

The annual municipal facility inspections will be performed by the Natural Resources Department. Records of municipal facility inspections will be maintained by the Natural Resources Department for a minimum of three years following the inspection.

If deficiencies are noted during an annual municipal facility inspection, the deficiencies will be addressed. The facility will be re-inspected to ensure that corrective actions are taken and the deficiencies are corrected.

Evaluation Criteria: Municipal facilities with operations that have the potential to contribute pollutants to storm water will be noted on the Municipal Facility Inventory discussed in Strategy 1. The City will also report the number of municipal facility inspections conducted during the reporting period.

10.2.8 Employee Training

Strategy 21. Employee Training

Appropriate City personnel will undergo annual training on good housekeeping practices and the developed SOPs. Topics may include, but are not limited to:

- Equipment washing
- Street sweeping
- Maintenance of municipal roads

- Storage and disposal of chemicals and waste materials
- Vegetation control, cutting, removal, and disposal of the cuttings
- Vehicle fleets/equipment maintenance and repair
- External building maintenance
- Materials storage facilities and storage yards

Evaluation Criteria: The City will report the dates municipal employees underwent training, the number of attendees, and the departments represented.

10.2.9 Water Quality Impacts

Strategy 22. Assess Water Quality Impacts for City Flood Management Projects

The Engineering Department will assess water quality impacts for City-owned or operated flood management projects (e.g., detention ponds, retention ponds, storm water conveyance improvements, etc.) implemented after **October 1, 2020**. The assessment will include an evaluation of pre-construction and post-construction discharge rates for compliance with the *Huntsville Stormwater Management Manual* and the reissued Phase I permit.

Evaluation Criteria: The City will report the number of new flood management projects that were assessed for water quality impacts during the reporting period.

Strategy 23. Evaluate Retrofitting Existing Structural Controls

To address the issue of storm water from older developments, the Engineering Department will evaluate the feasibility of retrofitting existing structural controls to provide additional pollutant removal. Retrofits include new installations or upgrades to existing BMPs in developed areas where there is inadequate storm water treatment. Storm water retrofit goals may include, but are not limited to:

- Flood mitigation
- Improving infiltration
- Addressing selected pollutants
- Correction of identified performance issues
- Disconnecting impervious areas
- Demonstrating new technologies

Evaluation Criteria: The City will report the number of existing projects evaluated for retrofitting during the reporting period.

10.3 Responsible Parties

The **Engineering Department** is responsible for evaluating water quality impacts from flood control projects and evaluating the feasibility of retrofitting existing structural controls. The Engineering Department is also responsible for conducting inspections of construction sites.

The **Landscape Management Department** is responsible for collection and disposal of the waste collected in City-owned or operated BMPs. Landscape Management is responsible for responding to complaints regarding violations of the litter and trash ordinances and will maintain records on the locations and types of complaints and enforcement actions. Landscape Management is also responsible for administering the Street Sweeping Program and for verifying that the contracted pesticide applicator has appropriate certifications and permit coverage.

The **Natural Resources Department** is responsible for coordinating the annual municipal BMP training, and compiling the required data, as received from participating departments, for inclusion in the Annual Report.

11.0 Application of Pesticide, Herbicide, and Fertilizers

The objective of the Pesticide, Herbicide, and Fertilizers (PHF) Program is to reduce the impacts of PHF application on waterbodies within the MS4. To evaluate the success of the program and aid in preparing the required Annual Reports, evaluation criteria have been established for each strategy.

11.1 Rationale

The application of PHFs has the potential to affect water quality within the City of Huntsville due to runoff from areas where PHFs are used. Pesticides and herbicides in storm water may result in harm to aquatic life. Fertilizers such as phosphorous or nitrates may lead to excessive plant grown and eutrophication.

Best Management practices for usage, storage, and disposal of PHF can be effective in limiting the amount of PHF entering storm water runoff. The PHF Program addresses municipal PHF usage.

11.2 Strategies

11.2.1 PHF Application Areas

Strategy 1. Identify High-PHF Application Areas

The City has identified the following areas with potential for high PHF application:

- Blue-line waterbodies
- Storm water detention ponds
- Golf courses
- Recreational ball fields
- Public parks
- City-maintained green space at public buildings (e.g., schools)
- Roadway ditches with limited access for equipment

The City will continue to utilize mechanical methods of vegetation maintenance where practical to limit the amount of herbicide applied.

PHFs are currently applied in areas where equipment access is limited, on recreational ball fields, and on blue-line streams within the MS4. Aquatic pesticide application is contracted out. PHF application at other City-maintained locations is performed by certified employees within the Landscape Management Department.

The Huntsville-Madison County Health Department Environmental Health Division also operates a Vector Control Program, which includes mosquito surveillance and pesticide applications.

Evaluation Criteria: The City will evaluate PHF usage by municipal personnel or contractors and report application amount beyond routine, scheduled applications during the reporting period.

Strategy 2. Program to Detect Improper Usage

Indicators of PHF runoff include algal blooms and fish kills. The City will respond to complaints of algal blooms and fish kills, and an evaluation will be conducted to determine if improper PHF usage was a factor. The evaluation may include sampling and analysis for PHFs.

The wet-weather monitoring program includes analysis of samples for total phosphorous and total nitrogen. Areas with high phosphorous and nitrogen will be evaluated to determine if improper PHF usage is a factor.

Evaluation Criteria: The City will report the number of investigations of fish kills or algal blooms during the reporting period. Results of analyses related to the investigations will be included in the Annual Report.

Strategy 3. Prioritize Problem Areas

Areas where improper PHF use is identified will be prioritized for additional education on PHF usage.

Evaluation Criteria: The City will report the areas targeted for additional education on PHF usage during the reporting period.

11.2.2 Certification and Licensing

Strategy 4. Require PHF Contractor to Obtain Certifications and Permits

All aquatic PHF application within the City of Huntsville is contracted to commercial applicators. This contractor applies herbicide to blue-line streams within the City.

Commercial and non-commercial pesticide applicators in the State of Alabama are required to obtain applicator permits through the Alabama Department of Agriculture and Industries.

NPDES General Permit ALG870000 covers the application of pesticides for four use patterns:

a) Mosquito and other flying insect control

b) Weed and algae pest control

c) Animal pest control in water and at water's edge

d) Forest canopy or other area-wide pest control

General NPDES Permit ALG870000 requires the development of a Pesticide Discharge Management Plan (PDMP) outlining Standard Operating Procedures for PHF application, storage, disposal, and equipment maintenance.

Landscape Management will require the contracted applicators to provide proof of current applicator certifications and NPDES permit coverage.

Evaluation Criteria: The City will review the certifications and permits provided by pesticide contractors. The results of the review will be included in the Annual Report.

Cross-Reference: Section 10.2.6, Strategy 19

Strategy 5. Require Appropriate Municipal Employees to Maintain Certification

The PHF application activities conducted by City personnel do not fall under the four use patterns identified in the ALG870000 permit; therefore, the City is not currently required to apply for coverage under the general permit.

Municipal personnel involved in the application, storage, and/or disposal of PHF will obtain and maintain applicator certification through the Alabama Department of Agriculture and Industries.

Evaluation Criteria: The City will include copies of all current municipal employee applicator certifications in the Annual Report.

11.2.3 PHF Storage and Inventory

Strategy 6. PHF Inventory

PHFs are currently stored at three municipal maintenance facilities operated by the Landscape Management Department. An inventory of the PHFs stored on-site and current Safety Data Sheets (SDS) for each product are maintained at each facility.

Table 11-1 Municipal PHF Storage Locations

Facility	Address
Forestry/Horticulture	2411 9th Avenue
South Maintenance	3242F Leeman Ferry Road
North Maintenance	3147 Lodge Road

The stored PHFs consist of concentrated liquids and granules. PHFs are stored in ventilated storage rooms with secondary containment. The purchase of PHF is managed to minimize the amounts of PHF stored at municipal facilities.

Evaluation Criteria: The City will include a list of municipal PHF storage facilities in each Annual Report. An example inventory report will also be included.

Strategy 7. Standard Operating Procedure for PHF Use, Storage, and Disposal

The City will develop a Standard Operating Procedure for the storage, use, and disposal of PHF. The PHF SOP will be developed by **September 30, 2019** and will be implemented at the appropriate municipal facilities no later than **September 30, 2020**.

Once implemented, the PHF SOP will be evaluated each year by September 30. A summary of proposed changes will be included in the Annual Report.

Evaluation Criteria: The City will report completion of the PHF SOP in the 2018-2019 Annual Report. The City will report the results of the annual evaluation of the SOP in each subsequent Annual Report.

Cross-Reference: Section 10.2.6, Strategy 18

11.2.4 Equipment Use and Maintenance

Strategy 8. PHF Equipment Use and Maintenance

Landscape Management will continue to perform minor repairs and routine maintenance of application equipment. The Fleet Management Division will continue to perform major repairs and maintenance tasks of application equipment.

Evaluation Criteria: The City will provide a summary of work orders for application equipment repairs conducted during the reporting period.

11.2.5 PHF Training

Strategy 9. PHF Training

PHF certifications issued by the Department of Agriculture and Industries (DAI) are valid for a period of three years. To maintain certification, applicators are required to obtain at least 30 hours of DAI-approved continuing education during the three-year period.

Landscape Management will ensure that municipal employees with DAI pesticide applicator certifications attend appropriate PHF training to maintain their certifications.

Evaluation Criteria: The City will include a list of all current municipal employee applicator certifications in the Annual Report.

11.2.6 Inspection and Monitoring of Storage Facilities

Strategy 10. Inspection of PHF Storage Facilities

Landscape Management will inspect the identified municipal PHF storage facilities on a regular basis to determine compliance with the PHF Standard Operating Procedure. Storage facilities are inspected weekly during the winter months and daily during the warmer months of the year. The date of each inspection and the initials of the employee conducting the inspection will be recorded on inspection logs maintained at the facilities.

Evaluation Criteria: The City will include an example inspection log from the reporting period in the Annual Report.

11.2.7 Record Keeping

Strategy 11. Maintain Records

The City will maintain the following documentation as part of the PHF Program:

- List of high-PHF application areas
- Copies of contractor application certifications and permits
- Copies of municipal employee application certifications
- Inspection logs for municipal PHF storage facilities

Evaluation Criteria: Representative copies of the listed documents will be included in the Annual Report.

11.3 Responsible Parties

The **Landscape Management Department** will be responsible for conducting the municipal storage facility inspections, maintaining inventories, and performing minor equipment repairs and maintenance. Landscape Management is also responsible for the application of PHFs (aside from aquatic application and Vector Control activities), ensuring applicator training, and requiring contractors to maintain coverage and compliance.

The **Fleet Management Division** will be responsible for major repairs and maintenance issues for application equipment.

The **Natural Resources Department** is responsible for compiling the required data, as received from participating departments, for inclusion in the Annual Report.

12.0 Oils, Toxic, and Household Hazardous Waste Control

12.1 Rationale

The City will develop and implement a program for oils, toxics, and household hazardous waste control. These procedures will address storm water pollution from oils, toxics, and household hazardous waste and include educational information and employee training.

12.2 Strategies

12.2.1 Prohibit Discharge or Disposal into the MS4

Strategy 1. Prohibit Illicit Discharges

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998 under Chapter 21 of the Code of Ordinances, City of Huntsville, Alabama *Article III. Storm Sewers*. Article III, Division 2 establishes regulations for NPDES compliance within the City. A copy of the ordinance is located in Appendix C.

The discharge of used motor vehicle fluids and household hazardous wastes is prohibited under Section 21-336 of the ordinance. Section 21-336 specifically prohibits illicit discharges into the Huntsville storm sewer system and identifies an illicit discharge as "*any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer system) and discharges from firefighting and emergency management activities*."

Evaluation Criteria: The NPDES Compliance ordinance will be reviewed on an annual basis and updated as needed. The ordinance will be evaluated on its effectiveness in addressing identified illicit discharges and preventing repeat offenders.

Cross-Reference: Section 6.2.1, Strategy 1

Strategy 2. Enforcement

Section 21-342 of the ordinance authorizes the Natural Resources Director or any person under his supervision to issue citations.

The ordinance specifically prohibits the City from taking any enforcement action for a violation of the ordinance if ADEM has already commenced enforcement actions for the same violation, including the issuance of a Notice of Violation or an administrative order.

Evaluation Criteria: The City will annually report the number of illicit discharge complaints received, the number of illicit discharges identified during the reporting period, and the number of resolved violations.

Cross-Reference: Section 6.2.1, Strategy 1

12.2.2 Education on Oils, Toxics, and Household Hazardous Waste

Strategy 3. Huntsville MS4 Webpage

The City will develop and maintain a webpage about storm water on the City of Huntsville website. The Huntsville MS4 webpage will:

- Include general information on the Huntsville MS4
- Discuss the storm water cycle and how common contaminants enter the storm water system
- Educate households and businesses about proper and improper use, storage, and disposal of common household chemicals
- Provide links to related storm water resources
- Provide contact information for reporting illicit discharges or other storm water complaints

This strategy will target the general public, engineers, landscapers, business owners, land use planners, property managers, and city personnel.

Evaluation Criteria: Participation will be tracked by recording the number of "hits" on the webpage. The City will report the number of hits in the Annual Report.

Strategy 4. Distribution of Educational Material

The City will distribute storm water educational material during each reporting period. Educational material may be developed by the City, organizations such as ADEM or the EPA, or other stakeholder groups. Educational materials may:

- Introduce the MS4 to the general public
- Discuss the storm water cycle and how common contaminants enter the storm water system
- Educate households and businesses about proper and improper use, storage, and disposal of common household chemicals such as herbicides, pesticides, and fertilizers
- Explain how the improper use of chemicals can impact storm water quality
- Explain what individual households and businesses can do to reduce storm water pollutants

- Provide information on BMPs for use and storage of common household chemicals
- Provide information on storm water contacts within the City of Huntsville and information on reporting potential storm water violations

Evaluation Criteria: The City will report the number of educational materials developed or prepared for distribution during the reporting period and the method of distribution.

12.2.3 Collection of Oils, Toxics, and Household Hazardous Waste

Strategy 5.	**Hazardous Waste Collection Program**

The City will promote the "Handle with Care" hazardous waste collection program administered by the Huntsville Solid Waste Disposal Authority (SWDA). The program encourages residents to properly dispose of hazardous materials.

SDWA currently operates a drive-through facility that allows drop-off of household hazardous wastes five days per week during business hours. Residents of Madison County may dispose of the following types of household hazardous waste free of charge:

- Paint and paint related products
- Automotive products
- Lawn and garden chemicals
- Household cleaners
- Old TVs and computers
- Household chemicals

Evaluation Criteria: The City will report the amount of household hazardous waste collected during the reporting period.

Cross-Reference: Section 5.2.4, Strategy 16

12.2.4 Employee Training

Strategy 6.	**Municipal Employee Training**

Appropriate City personnel will undergo annual training on good housekeeping practices and the developed SOPs. The training will include spill prevention at municipal facilities where oil or toxic materials are used.

Evaluation Criteria: The City will report the dates municipal employees underwent training, the number of attendees, and the departments represented.

Cross-Reference: Section 10.2.8, Strategy 21

12.3 Responsible Parties

The **Huntsville Solid Waste Disposal Authority** is responsible for the curbside recycling program and the hazardous waste collection facility.

Operation Green Team is responsible for coordinating public outreach events, developing or coordinating the development of educational materials or displays, and providing information on the programs and events to the Natural Resources Department for inclusion in the Annual Report.

The **Natural Resources Department** will be responsible for enforcing the prohibition on illicit discharges, coordinating the annual municipal employee BMP training, and compiling the required data, as received by participating departments, for inclusion in the Annual Report.

13.0 Industrial Storm Water Runoff

The City will 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. To evaluate the success of the program and aid in preparing the required Annual Reports, evaluation criteria have been established for each strategy.

13.1 Rationale

Industrial facilities can contribute pollutants to the MS4 through spills, exposure of stored materials, and authorized storm water discharges. Common sources of pollutants at industrial facilities include, but are not limited to:

- Material handling equipment or activities
- Industrial equipment
- Bulk petroleum storage
- Raw materials
- Intermediate products
- By-products
- Final products
- Waste products

The City's Industrial Storm Water Runoff Program is intended to mitigate the potential for the discharge of pollutants by encouraging the implementation of Best Management Practices, inspecting facilities to evaluate pollution prevention measures and outfalls, and tracking permitted sites.

13.2 Strategies

13.2.1 Facility Identification and Tracking

Strategy 1. Industrial Facility BMP Plan Approval

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998 amending Chapter 21 of the Code of Ordinances, City of Huntsville, Alabama *Article III Storm Sewers*. Article III, Division 2 establishes regulations for NPDES compliance for storm sewers. Subdivision II establishes procedures for Best Management Practices (BMP) Approval.

Section 21-351 requires industrial and high-risk facilities to submit an application for BMP plan approval and associated fee to the Natural Resources Department. The BMP

approval must be renewed every three years. Section 21-331 defines a high-risk facility as "*municipal landfills; other treatment, storage or disposal facilities for municipal waste (e.g., transfer stations, incinerators, etc.); and hazardous waste treatment, storage, disposal and recovery facilities*."

As part of the Industrial Storm Water Runoff program, the Natural Resources Department will review submitted BMP plan applications and issue BMP Plan approvals as detailed in Section 21-352 of the ordinance. The application information will be used to update mapping, identify high-risk facilities, schedule inspections, and document NPDES permit status.

Evaluation Criteria: The City will report the number of BMP plan applications approved during the reporting period. The City will also report the number of new industrial facilities that were approved during the reporting period.

Cross-Reference: Section 9.2.1, Strategy 1

Strategy 2. Identify High-Risk Facilities

Section 21-331 of Ordinance 98-3 defines a high-risk facility as "*municipal landfills; other treatment, storage or disposal facilities for municipal waste (e.g., transfer stations, incinerators, etc.); and hazardous waste treatment, storage, disposal and recovery facilities*." Part II.B.10(a) of the Phase I permit defines a high-risk facility as one "*that the Permittee determines is contributing substantial pollutants loading to the MS4*."

The following facilities within the City limits meet one or both definitions of a high-risk facility:

Table 13-1 High-Risk Facilities

Facility	Address	Type
Huntsville Landfill	4100 Leeman Ferry Road SW	Municipal Landfill
Valicor	107 Von Braun Dr NW	Hazardous Waste TSD

The Natural Resources Department will identify additional high-risk facilities using the BMP plan approval process, NPDES permit data submitted to ADEM, and the inspection process.

Evaluation Criteria: The City will report the total number of high-risk facilities operating in the City limits during the reporting period.

Strategy 3. Industrial Facility Inventory

The Natural Resources Department will maintain an inventory of industrial facilities within the City limits, NPDES-permitted and non-NPDES-permitted. Inventory data will be collected from the BMP plan approval process and from EPCRA 312/313 reporting. The inventory may be used to prioritize inspections, evaluate discharge types within watersheds, and identify major outfalls. A preliminary list of identified industrial facilities is included in Appendix F.

The GIS Department will map the inventoried industrial facilities in the City's GIS. The outfalls from each facility will be included, when such data is available. The map will be updated annually.

The Engineering Department will notify the GIS Department when plans for new industrial facilities are approved, so the new facilities, outfalls, and infrastructure can be added to the City's GIS.

Evaluation Criteria: The City will report the total number of industrial facilities operating in the City limits during the reporting period. The updated map of identified industrial facilities will be included in the Annual Report.

Cross-Reference: Section 9.2.1, Strategy 2

13.2.2 Inspection Program

Strategy 4. Industrial Facility Inspections

Storm water inspections of industrial facilities within the City of Huntsville will be conducted by the Natural Resources Department on the following schedule:

- Identified high-risk facilities will be inspected annually.
- Non-NPDES-permitted industrial facilities with air permits will be inspected annually. The storm water inspection will be conducted concurrently with the air permit inspection.
- Non-NPDES-permitted industrial facilities without air permits will be inspected periodically, with at least 20 percent of the facilities inspected per year. All identified industrial facilities will be inspected once every 5 years.

The inspections will be conducted using the **Stormwater Compliance Evaluation Inspection** form in Appendix E or an equivalent form.

The City will rely on the Alabama Department of Environmental Management (ADEM) for the inspection of industrial facilities with NPDES permits.

Evaluation Criteria: The City will report the number of industrial facilities inspections conducted during the reporting period.

Cross-Reference: Section 9.2.1, Strategy 3

13.2.3 Enforcement Program

Strategy 5.	**Citation**

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998 amending Chapter 21 of the Code of Ordinances, City of Huntsville, Alabama. *Article III Storm Sewers.* Article III, Division 2 establishes regulations for NPDES compliance for storm sewers.

Section 21-336 of Ordinance Number 98-3 prohibits the discharge of pollutants to the MS4, except as authorized by a BMP plan approval or a valid NPDES permit.

Section 21-342 of Ordinance Number 98-3 authorizes the Natural Resources Director and any person acting under his supervision to issue citations for violations of the ordinance. The ordinance specifically prohibits the City from taking any enforcement action for a violation of the ordinance if ADEM has already commenced enforcement actions for the same violation, including the issuance of a Notice of Violation or an administrative order.

If an industrial facility is observed to discharge pollutants that violate the terms of the BMP plan approval or NPDES permit, the Natural Resources Director or a person under his supervision will issue a citation to the owner or operator of the facility.

Evaluation Criteria: The City will report the number of citations issued for illicit industrial discharges during the reporting period.

Cross-Reference: Section 6.2.1, Strategy 1

13.3 Responsible Parties

The **Natural Resources Department** is responsible for implementing the Industrial Storm Water Runoff Program.

The **Engineering Department** is responsible for reporting new industrial sites to the GIS Department for inclusion in the City's GIS.

The **GIS Department** is responsible for mapping the inventory of industrial sites. The GIS Department will provide the updated map of industrial facilities annually for inclusion in the Annual Report.

14.0 Wet-Weather Monitoring Program

Part III of the reissued Phase I permit requires that the City implement a monitoring program to assess the effectiveness and adequacy of BMPs implemented under the SWMPP.

14.1 Representative Monitoring

Part III.A.1 of the Permit requires that the City perform monitoring for the following four waterbodies:

- Huntsville Spring Branch
- Indian Creek
- Aldridge Creek
- McDonald Creek

14.2 Impaired Waterbody Monitoring

14.2.1 Pollutants of Concern

As discussed in Section 1.4, the Huntsville MS4 incorporates several impaired waterbodies, as well as portions of watersheds of additional impaired waterbodies. Part III.A.2 of the Phase I permit requires that the City include monitoring that addresses the impairment or the TMDL.

The following table lists the waterbodies within the City limits that have approved TMDLs:

Table 14-1 Approved TMDLs within the City Limits

Waterbody	TMDL Parameters
Flint River	Fecal coliform
Chase Creek	CBOD, NBOD, Siltation
Goose Creek	CBOD, NBOD, E. Coli
Indian Creek	CBOD, NBOD, Siltation
Limestone Creek	CBOD, NBOD, Siltation
Aldridge Creek	CBOD, NBOD, Siltation

The following table lists the 303(d)-listed waterbodies within the City limits, as well as the pollutants identified as the cause of the impairment.

Table 14-2 303(d)-Listed Waterbodies within the City Limits

Waterbody	Causes of Impairment
Chase Creek	Pathogens (E. Coli) from pasture grazing
Flint River	Turbidity from agriculture, land development
Huntsville Spring Branch	Metals (Arsenic) from urban runoff/storm sewers
Indian Creek	Pathogens (E. Coli) from collection system failure, pasture grazing, urban runoff/storm sewers
Limestone Creek	Metals (Mercury) from atmospheric deposition

The permit requires that if a waterbody is added to the 303(d) list or if a TMDL is established during the permit cycle, then the City must revise the monitoring program to include monitoring that addresses that impairment or TMDL. The Natural Resources Department will verify the latest final 303(d) list and those water bodies with an EPA established TMDL to determine if additional sampling points or parameters are required.

14.3 Wet-Weather Monitoring Parameters

Monitoring will be conducted semi-annually at the designated outfalls for the following parameters, as detailed in Part III.B of the permit:

a. E. Coli
b. Total Nitrogen (TN)
c. Total Phosphorous
d. Total Suspended Solids (TSS)
e. Temperature*
f. pH / ORP*
g. Turbidity*
h. Conductivity*
i. Dissolved oxygen*
j. Ammonia nitrogen
k. Biochemical oxygen demand (BOD)
l. Chemical oxygen demand (COD)
m. Hardness as $CaCO_3$

n. Nitrate plus nitrite nitrogen

o. Oil and grease

p. Total dissolved solids (TDS)

q. Total Kjeldahl nitrogen (TKN)

* Field parameters

The parameters listed in the permit incorporate the majority of the parameters associated with the TMDLs and 303(d) impairments; however, the metals impairments require additional analyses. Currently, only Limestone Creek and Huntsville Spring Branch are impaired for mercury or arsenic, but to prevent sampling errors, the following parameters will also be included in the analyses conducted at each monitoring point:

- Arsenic
- Mercury

14.4 Monitoring Locations

The primary monitoring locations selected for determining the effectiveness of the BMPs prescribed in the SWMPP are identified on **Figure 8** in Appendix A. Coordinates for each point are listed below.

Table 14-3 Monitoring Point Coordinates

Waterbody	Permit	TMDL	303(d)	Point ID	Latitude	Longitude
Aldridge Creek	Y	Y		MP-1	34.585624°	-86.552838°
Chase Creek		Y	Y	MP-2	34.787365°	-86.485346°
Flint River		Y	Y	MP-3	34.789481°	-86.485597°
Goose Creek		Y		MP-4	34.639879°	-86.457896°
Huntsville Spring Branch	Y		Y	MP-5	34.690152°	-86.596402°
Indian Creek	Y	Y	Y	MP-6	34.709178°	-86.700940°
Limestone Creek		Y		MP-7	34.631830°	-86.867048°
McDonald Creek	Y			MP-8	34.688449°	-86.622402°

14.5 Sample Frequency

The grab samples will be collected from the discharge resulting from a storm event that is greater than 0.1 inches and occurs at least 72 hours after the previously measurable storm event (greater than 0.1 inch rainfall). The grab samples will be taken within the first two hours of discharge.

If the City is unable to collect grab samples due to adverse conditions, the City will submit in the Annual Report 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 unsafe conditions for personnel (e.g., local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

14.6 Field Documentation

The following observations will be documented in the field at each monitoring location:

- Monitoring point ID
- Date and time
- Person conducting the sampling
- Equipment used
- Depth of sample collection
- Weather conditions
- Waterbody conditions
- Field parameters (turbidity, pH, DO, temperature, ORP and conductivity)

14.7 Sampling Procedures

- Prior to monitoring, calibrate sampling equipment.
- Unless disposable materials are used, sampling equipment must be decontaminated prior to sampling and in between samples.
- Be sure bottles are appropriately labeled prior to sample collection.
- If sampling from a bridge, lower a decontaminated sample container/bucket into the stream. The sample should be collected at mid-depth. The sampling device should not be allowed to touch the bottom of the stream.
- Analyze the sample for turbidity, pH, ORP, conductivity, dissolved oxygen, and temperature.
- Fill all appropriate, pre-labeled, sample bottles and add preservatives to sample, if required. Immediately place the sample containers in a cooler containing ice for transport to the laboratory.

14.8 Quality Assurance / Quality Control

Quality Assurance (QA) and Quality Control (QC) activities are designed to achieve the specific data quality goals associated with the sampling program and will follow EPA and ADEM guidance.

14.8.1 Sample Containers and Preservation

All samples will be collected in new laboratory-provided containers containing analyte-appropriate preservatives as listed below:

Table 14-4 Sample Containers and Preservation

Parameter	EPA Method	Container	Preservative	Hold Time
E. Coli	9223B-2004	Microbiological container	-	**8 hours**
Total Nitrogen (TN)	Calculation	HDPE – 250 mL	H_2SO_4	28 days
Total Phosphorous	365.4	HDPE - 250 mL	H_2SO_4	48 hours
Total Suspended Solids (TSS)	2540D	HDPE - 1 L	-	7 days
Ammonia nitrogen	350.1	HDPE – 125 mL	NaThio / H_2SO_4	28 days
Biochemical oxygen demand (BOD)	5210B	HDPE – 500 mL	-	48 hours
Chemical oxygen demand (COD)	410.4	HDPE – 250 mL	H_2SO_4	28 days
Hardness as $CaCO_3$	130.1	HDPE – 250 mL	HNO_3	180 days
Nitrate plus nitrite nitrogen	353.2	HDPE - 250 mL	H_2SO_4	28 days
Oil and grease	1664A	Clear – 1L	HCL	28 days
Total dissolved solids (TDS)	2540C	HDPE – 250 mL	-	7 days
Total Kjeldahl nitrogen (TKN)	351.2	HDPE - 250 mL	H_2SO_4	28 days
Arsenic	200.7	HDPE – 250 mL	HNO_3	180 days
Mercury	245.1	HDPE – 250 mL	HNO_3	28 days

14.8.2 Quality Assurance

A minimum of one duplicate for every 10 samples will be submitted to the laboratory. If less than 10 samples are collected in a sampling event, one duplicate sample will be collected each sampling event. The sample will be labeled in the same manner and not be identified to the laboratory as a duplicate.

14.8.3 Equipment Decontamination

All reusable sampling equipment will be decontaminated prior to use and in between samples using the following procedure:

- Rinse with tap water
- Wash with non-phosphatic detergent solution
- Rinse with deionized water
- Allow equipment to air dry
- Containerize all rinsate for disposal

14.8.4 Sample Identification

Sample containers will be labeled with the following information in waterproof ink:

- Project number
- Sample location
- Collection date and time
- Preservative
- Analysis to be performed

14.8.5 Chain of Custody

Chain of custody documents will originate in the field and will accompany the samples to the laboratory. Copies of the chain of custody documents will be included with the laboratory reports in the annual report.

14.8.6 Sample Shipment

The samples will be shipped overnight or delivered to the laboratory in sealed coolers containing ice with the exception of E-coli samples. Due to the short holding time, E-coli samples will be delivered to the laboratory on the same day as the samples are collected.

14.9 Analytical Results

Field observations and analytical results will be recorded at the time of sampling. The resulting field notes and laboratory analytical reports will be retained for a minimum of three years.

A report consolidating the results from each semi-annual monitoring event will be submitted by the entity performing the monitoring to the Natural Resources Department. Each semi-annual monitoring report will be incorporated into the Annual Update of the Storm Water Management Plan. Monitoring reports will be retained for a minimum of three years.

14.10 Responsible Parties

The **Natural Resources Department** is responsible for coordinating the Wet-Weather Monitoring Program. The Natural Resources Department will verify the latest final 303(d) list and those water bodies with an EPA-established TMDL to determine if additional sampling points or parameters are required.

The **GIS Department** is responsible for mapping the monitoring locations. The GIS Department will provide the updated map of monitoring locations annually for inclusion in the Annual Report.

HUNTSVILLE
The Star of Alabama

15.0 Agency Certification

I certify under penalty of law that this Storm Water Management Program and all attachments pertaining to the City of Huntsville Municipal Separate Storm Sewer System were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 fine or imprisonment for knowing violations. ALL THIS IS TRUE TO THE BEST OF MY KNOWLEDGE

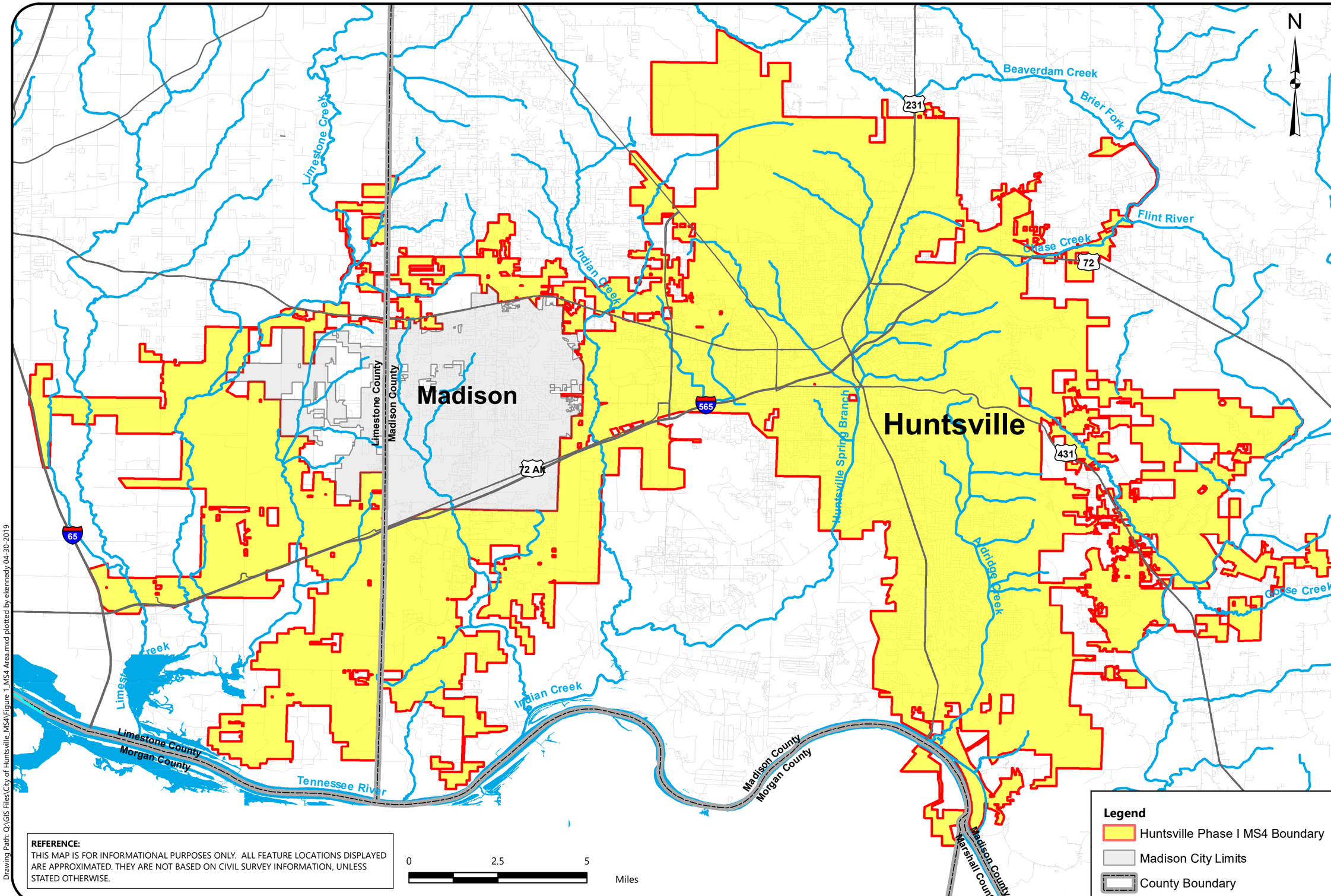
Tommy Battle, Jr.

Tommy Battle, Jr., Mayor
City of Huntsville, Alabama

June 24, 2019
Date

Appendices

Appendix A Figures



REFERENCE:
THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

0 2.5 5 Miles

Legend
- Huntsville Phase I MS4 Boundary
- Madison City Limits
- County Boundary

HUNTSVILLE PHASE I MS4 AREA

MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

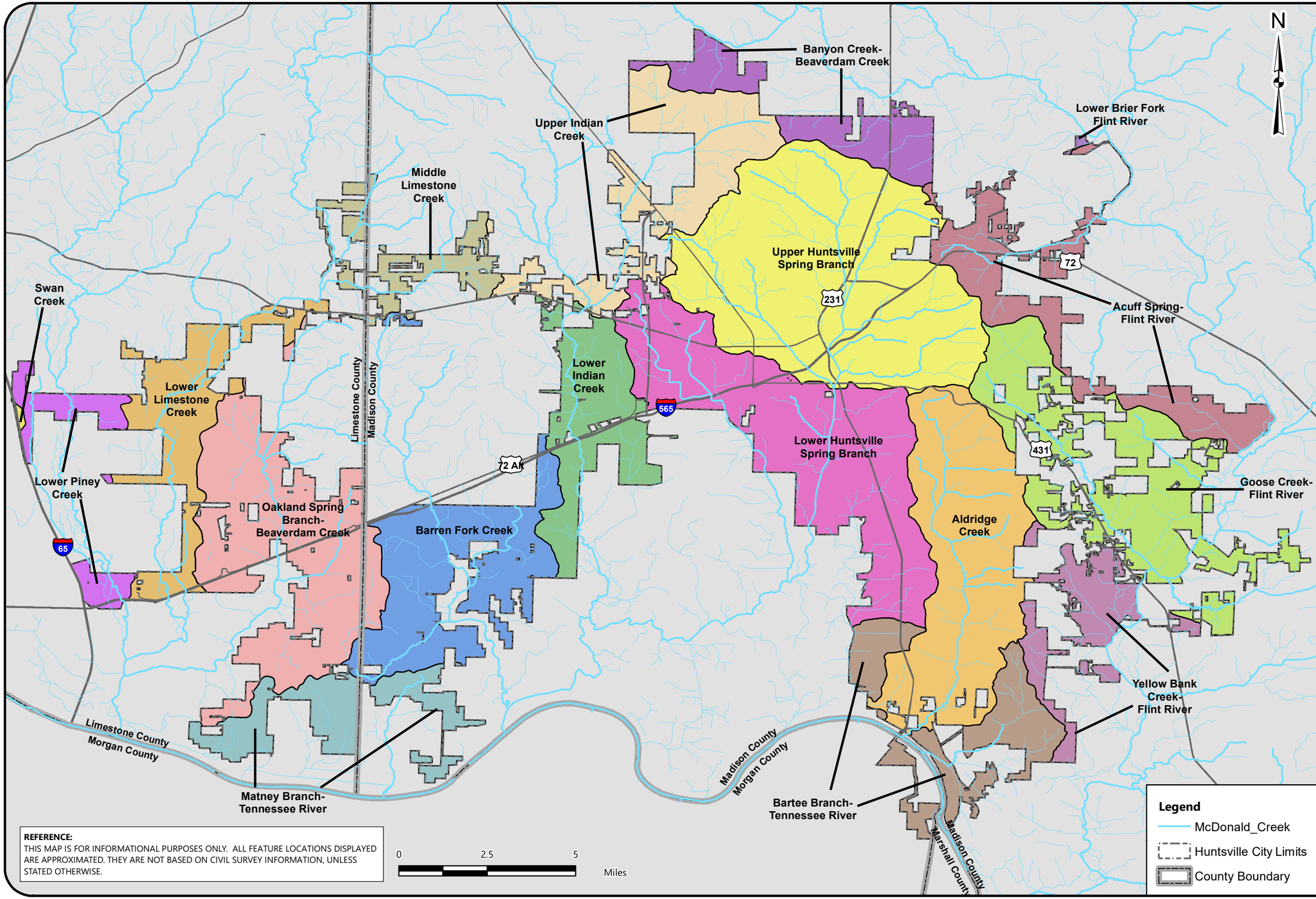
SCALE: 1:160,000

DATE: 04-29-19

PROJECT NUMBER 4482-19-001

FIGURE NO. 1

Drawing Path: Q:\GIS Files\City of Huntsville_MS4\Figure 1_MS4 Area.mxd plotted by ekennedy 04-30-2019



REFERENCE:
THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

HUC 12 WATERSHEDS

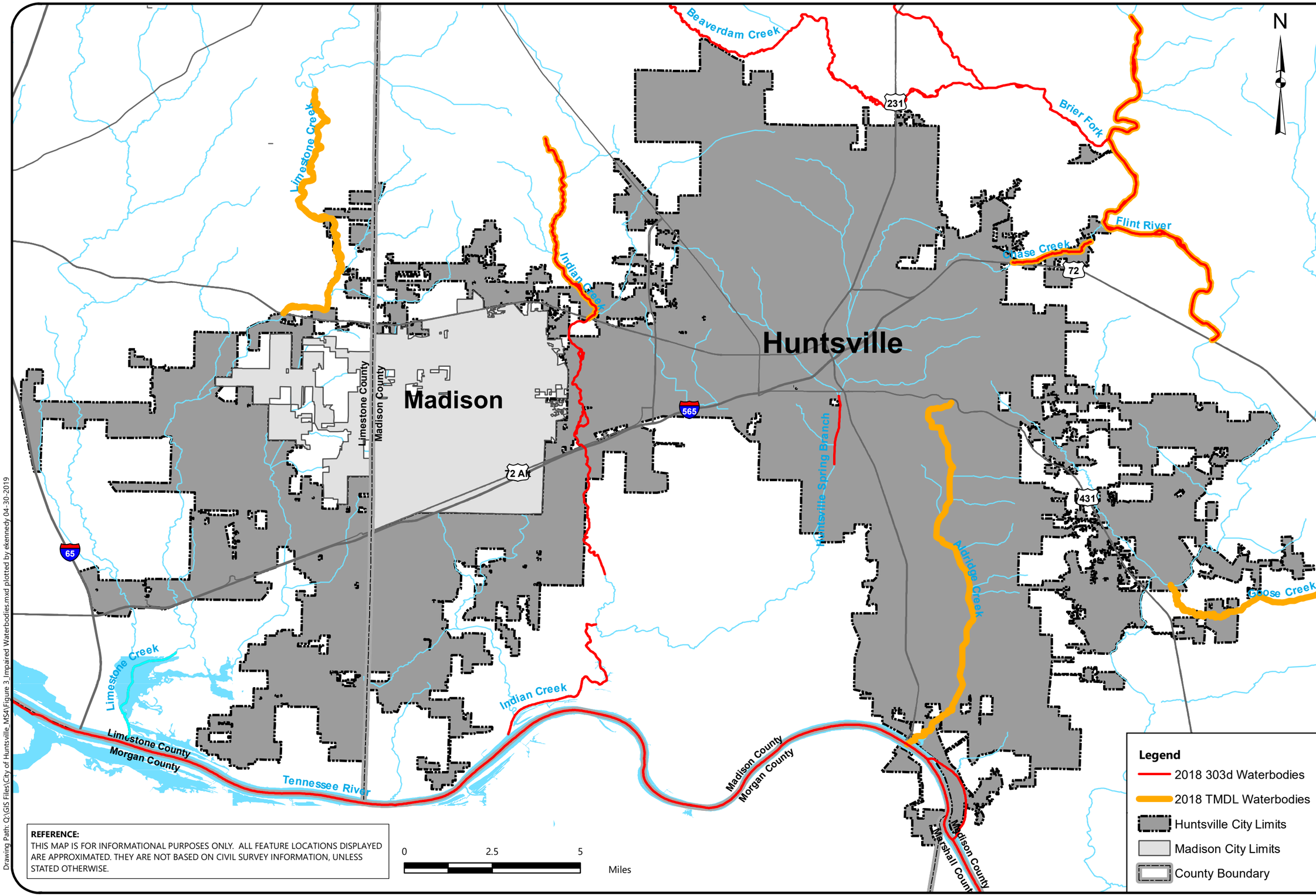
MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

SCALE:
1:160,000

DATE:
06-19-19

PROJECT NUMBER
4482-19-001

FIGURE NO.
2



REFERENCE:
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Drawing Path: Q:\GIS Files\City of Huntsville_MS4\Figure 3_Impaired Waterbodies.mxd plotted by ekennedy 04-30-2019

IMPAIRED WATERBODIES

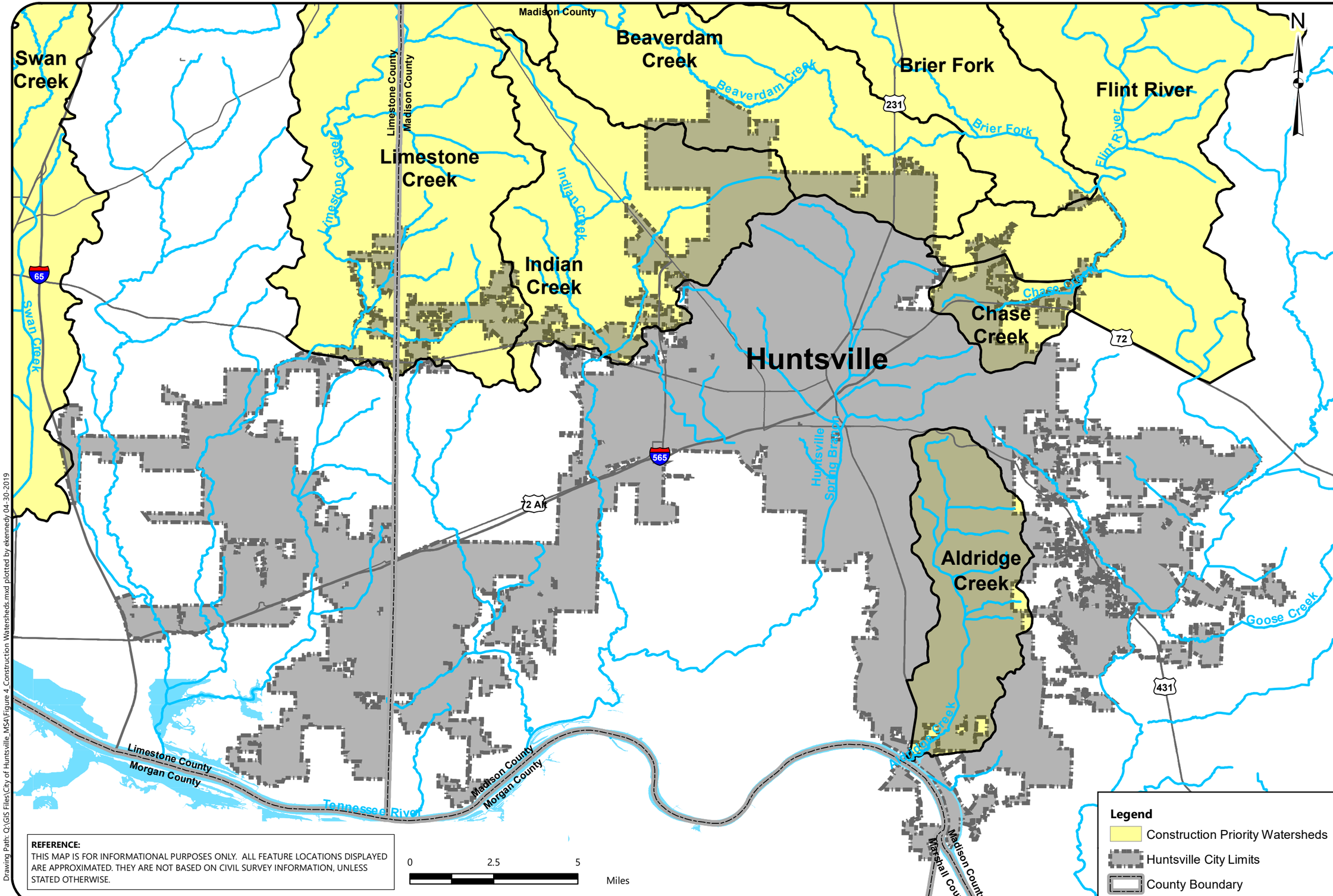
MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

SCALE:
1:160,000

DATE:
04-29-19

PROJECT NUMBER
4482-19-001

FIGURE NO.
3



REFERENCE:
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0 2.5 5 Miles

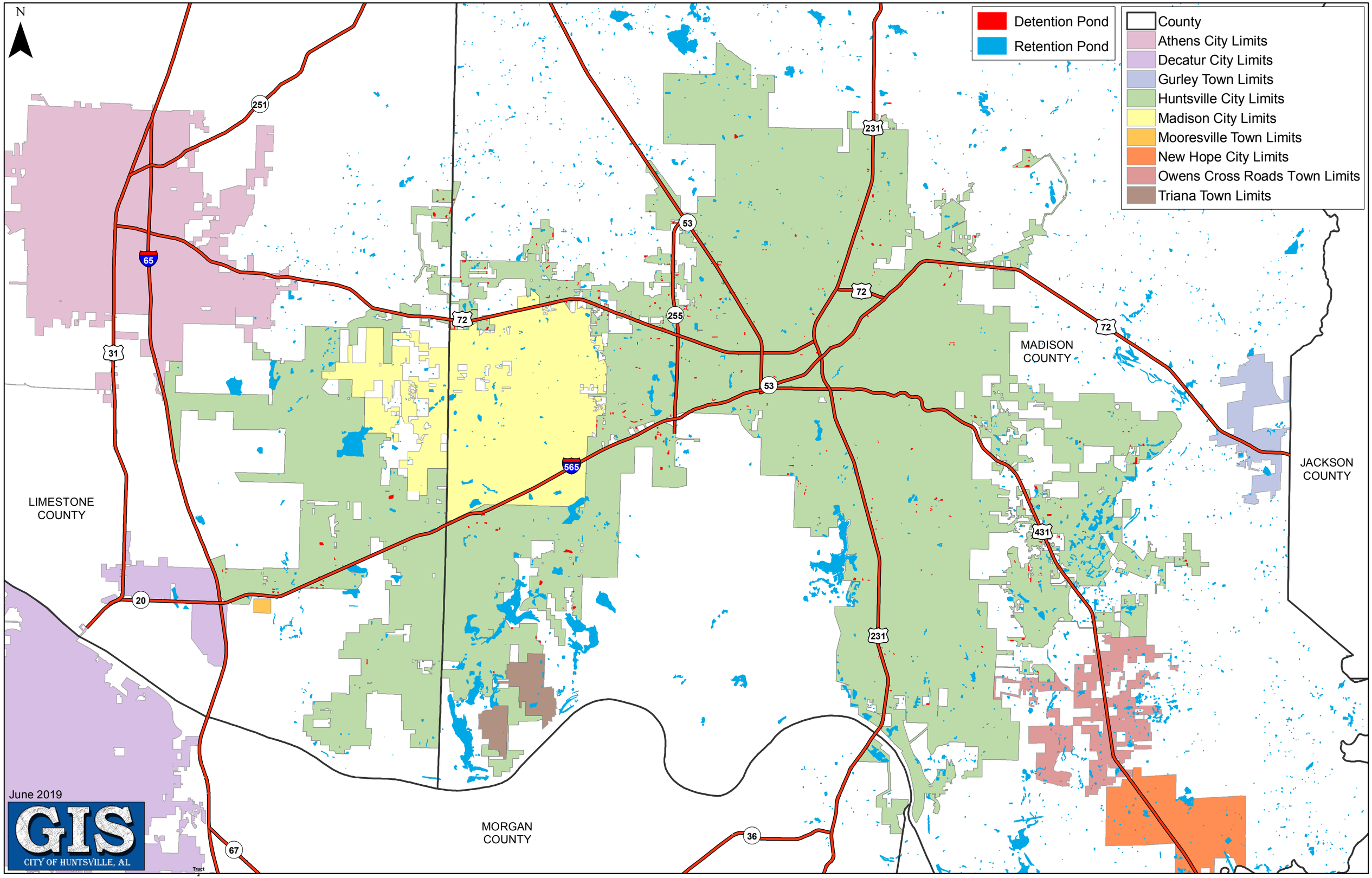
Legend
- Construction Priority Watersheds
- Huntsville City Limits
- County Boundary

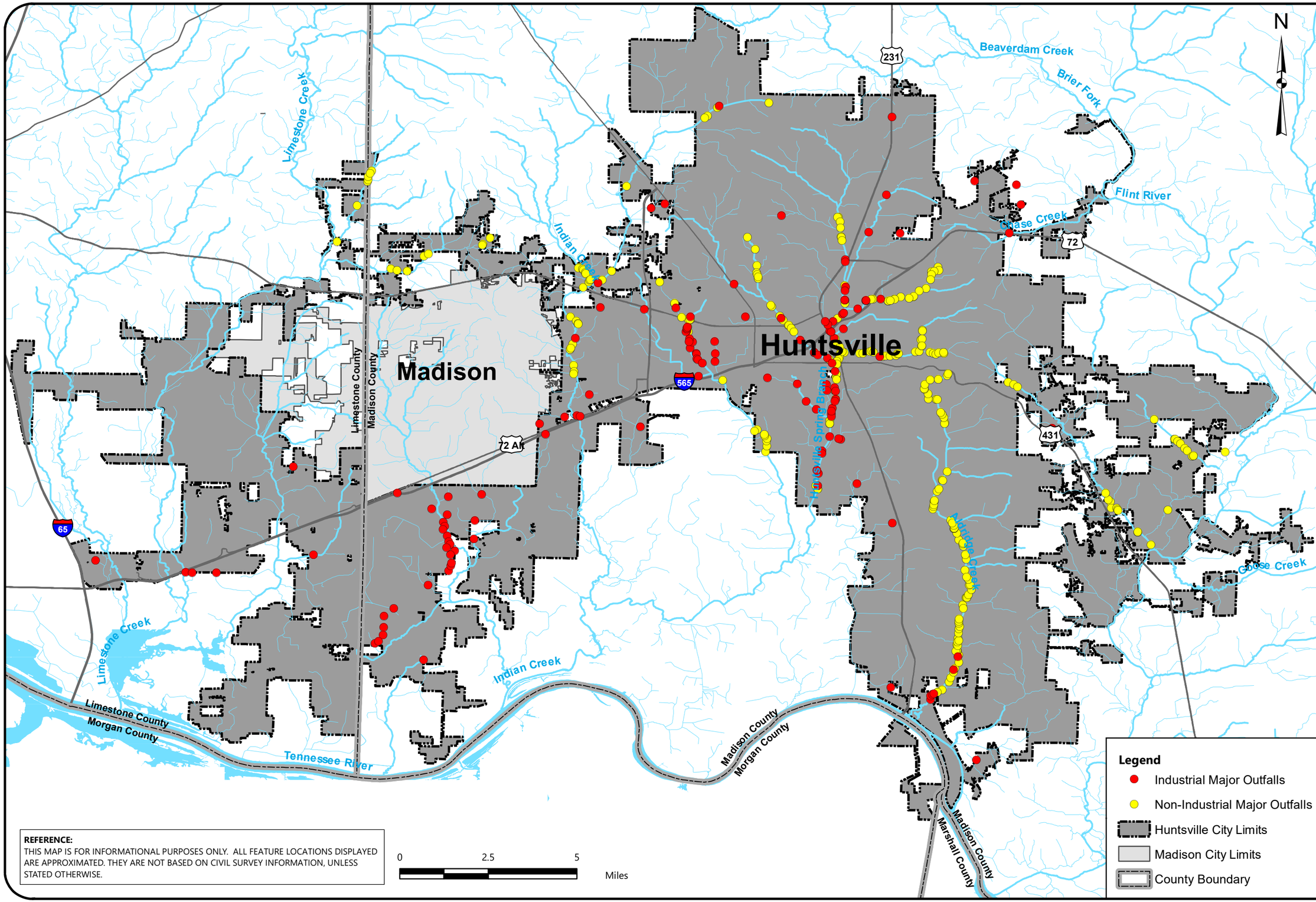
CONSTRUCTION PRIORITY WATERSHEDS

MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

SCALE: 1:170,000
DATE: 04-28-19
PROJECT NUMBER 4482-19-001
FIGURE NO. 4

Drawing Path: Q:\GIS Files\City of Huntsville_MS4\Figure 4_Construction Watersheds.mxd plotted by ekennedy 04-30-2019


N
Detention Pond
Retention Pond
County
Athens City Limits
Decatur City Limits
Gurley Town Limits
Huntsville City Limits
Madison City Limits
Mooresville Town Limits
New Hope City Limits
Owens Cross Roads Town Limits
Triana Town Limits
251
65
31
72
53
255
231
565
20
67
36
431
MADISON COUNTY
LIMESTONE COUNTY
MORGAN COUNTY
JACKSON COUNTY
June 2019
GIS
CITY OF HUNTSVILLE, AL



REFERENCE:
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IDENTIFIED MAJOR OUTFALLS

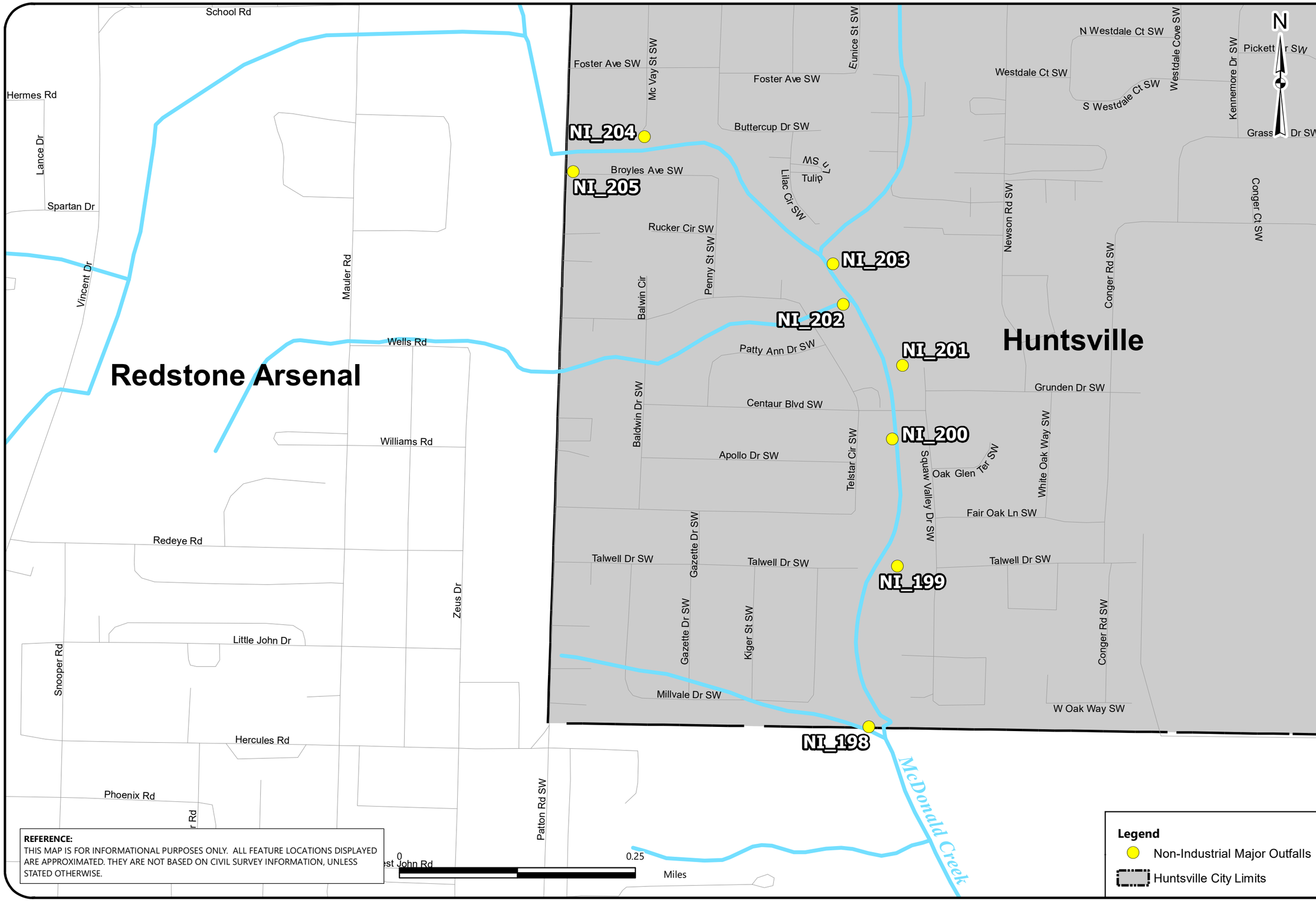
MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

SCALE:
1:160,000

DATE:
06-19-19

PROJECT NUMBER
4482-19-001

FIGURE NO.
6



REFERENCE:
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DESIGNATED IDDE PRIORITY AREA

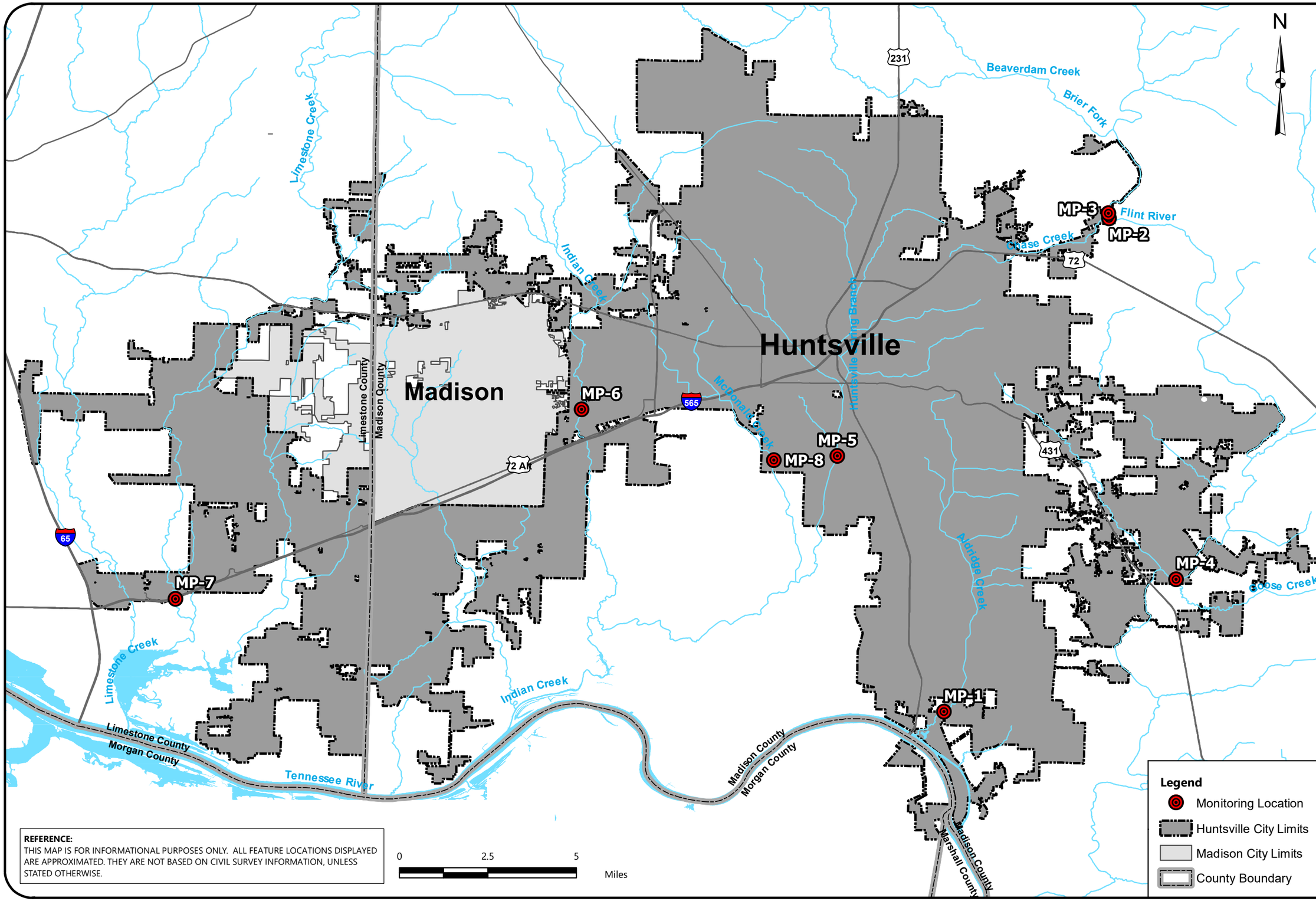
MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

SCALE:
1:6,000

DATE:

PROJECT NUMBER
4482-19-001

FIGURE NO.
7



REFERENCE:
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WET WEATHER MONITORING LOCATIONS

MUNICIPAL SEPARATE STORM SEWER SYSTEM
CITY OF HUNTSVILLE, ALABAMA

SCALE:
1:160,000

DATE:
06-19-19

PROJECT NUMBER
4482-19-001

FIGURE NO.
8

Appendix B Permit Documentation

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

September 26, 2018

Certified Mail # 91 7108 2133 3935 0351 4956

Honorable Tommy Battle, Jr.
Mayor, City of Huntsville
308 Fountain Circle
Huntsville, Alabama 35801

RE: Municipal Separate Storm Sewer System (MS4) Individual Phase I Permit
NPDES Number ALS000005
City of Huntsville MS4
Madison County (089)

Dear Mayor Battle:

The Department has made a final determination to issue NPDES Permit No. ALS000005 to the City of Huntsville for discharges from its MS4. The NPDES Permit Number ALS000005 will be effective October 1, 2018 and expire on September 30, 2023.

The Department notified the public of its tentative determination to issue NPDES Permit No. ALS000005 on June 29, 2018. Interested persons were provided the opportunity to submit comments on the Department's tentative decision through July 30, 2018. In accordance with ADEM Admin Code r. 335-6-6-.21(7), a response to all comments received during the public comment period is provided with the enclosed permit.

The City of Huntsville 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 or by phone at 334-270-5616.

Sincerely,

Jeffery W. Kitchens, Chief
Stormwater Management Branch
Water Division

JWK/mss

File: FPER
Enclosure: Final Permit/Response to Comments

cc: Ms. Kacy Sable /Environmental Protection Agency (via email)
Mr. Scott Cardno, City of Huntsville (via email)

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	CITY OF HUNTSVILLE
AREA OF COVERAGE:	CORPORATE BOUNDARIES OF THE CITY OF HUNTSVILLE
PERMIT NUMBER:	ALS000005
RECEIVING WATERS:	WATERBODIES WITHIN THE CORPORATE BOUNDARIES OF CITY OF HUNTSVILLE

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:	SEPTEMBER 26, 2018
EFFECTIVE DATE:	OCTOBER 1, 2018
EXPIRATION DATE:	SEPTEMBER 30, 2023

Glenda L. Dean

Alabama Department of Environmental Management

Table of Contents

Table of Contents (continued)

PART I Applicability

A. Permit Area

This permit applies to the corporate boundaries of the City of Huntsville 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/green-infrastructure;
    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 an annual basis, at a minimum;
3. Develop a standard operating procedure (SOP) or inspection checklist for structural control inspection and maintenance procedures;
4. Stabilize and re-vegetate eroded areas as needed; and
5. Remove floatables, litter, sediment and debris, in structural controls, 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 floatables, 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 MEP. 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 MEP, 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.X.)	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 quarterly

*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.	

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, if applicable.

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 qualifying 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 MEP, 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 or require documentation of the post-construction inspections. 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 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, cleanup 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
Huntsville Spring Branch	Semi-Annually
Indian Creek	Semi-Annually
Aldridge Creek	Semi-Annually
McDonald Creek	Semi-Annually

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. Grab samples shall be collected on Waterbodies listed in Part III.A.1. 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_3-N) (mg/l);
k. Biochemical Oxygen Demand (BOD) (mg/l);
l. Chemical Oxygen Demand (COD) (mg/l);
m. Hardness as $CaCO_3$ (mg/l);
n. Nitrate plus Nitrite Nitrogen (NO_3+NO_2-N) (mg/l);
o. Oil and Grease (mg/l);
p. Total Dissolved Solids (TDS) (mg/l);
q. Total Kjeldahl Nitrogen (TKN) (mg/l); and

2. 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 competed. 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. 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.

W. 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.

X. Definitions

1. "Alabama Handbook" means the July 2018 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 theF 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, evapotranspirate (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 Code335-6-6-.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.

ADEM Response to Comments re: Huntsville Draft MS4 Permit

Southern Environmental Law Center Comments – July 30, 2018

Re: Jefferson County (ALS000001) and Huntsville (ALS000005) MS4 Permit Renewal

Huntsville County (ALS000005)

Comment (1): We appreciate that Huntsville plans to label its storm drain inlets with "no dumping signs." However, Huntsville's monitoring program is even more limited than Jefferson County's. Huntsville only proposes to monitor semi-annually. Huntsville cannot understand whether it is actually complying with its permit under federal regulations with only semi-annual grab samples.[11] This is a low frequency in comparison to other cities – for example Alabaster and Bessemer monitor at least quarterly; Birmingham monitors bi-monthly; and Montgomery, Hoover, Vestavia Hills, and Trussville monitor hourly with sondes. As it leads in other scientific endeavors, Huntsville should consider setting an example (or at least join its peers) and increase the frequency of its monitoring. Without proper monitoring, water quality throughout the City may be harmed without any detection.

Response (1): Comment noted. While monitoring frequencies for all MS4s are not the same, the Department believes that the City of Huntsville's monitoring frequency is sufficient and is consistent with what has been required in the past. Comparison of MS4 monitoring programs may not be appropriate since the Permit allows for the flexibility of the Permittee to implement a monitoring program to provide data necessary to assess the effectiveness and adequacy of BMPs implemented under its SWMPP. Regarding your comment concerning the City of Huntsville's ability to assess its compliance with its MS4 Permit, the City utilizes direct measures to evaluate SWMP effectiveness as noted in the City's Annual Reports. Direct measures include chemical monitoring of stormwater discharge quality (data provided from 1992-present), chemical monitoring of receiving stream quality (data provided from 2001-present) and the use of bioassessment techniques (data provided from 1998 – present). Based on the City's historical monitoring program, the Department believes that the City's monitoring program is adequate. No changes were made to the draft Permit based on this comment.

Comment (2): Additionally, any discharges that could potentially affect Byrd Springs and the surrounding Tupelo Gum grove should also be monitored. As Huntsville knows, this is a unique wetland adjacent and directly downstream from the urban area that is a jewel and asset to Huntsville. It is a 650-acre old-growth Tupelo Gum swamp and a bottomland hardwood wetland. The U.S. Fish and Wildlife Service (FWS) has described Byrd Springs as "unique and irreplaceable" and a "pristine area."[12] The Wildlife Federation of Alabama has quoted FWS and stated that Byrd Springs is "probably 'the finest area of undisturbed wetlands remaining in the Tennessee Valley.... Any adverse impacts to these areas would be difficult if not impossible to mitigate."[13] The old-growth Tupelo Gum swamp, in particular, is an extremely rare type in this region.[14] However, instead of being protected, it is being choked by high levels of nutrients and invasive vegetation. See Photos, Exhibit 2-4. Monitoring the nitrogen and phosphorous at this site and any site upstream could assist this pristine area.

Response (2): Comment noted. Regarding your comment concerning the Byrd Springs and the surrounding Tupelo Gum Grove, as required by ADEM Administrative Code r.335-6-6-.21 (3) and 40 CFR 124, the Department maintains a mailing list which includes federal, state and local governments. The individuals and entities on this list, which includes the United States Fish and Wildlife Service (USFWS), are mailed legal notices regarding draft permits, including this permit. The Department received no comments on this draft permit from the USFWS. In addition, this area is outside the City's MS4

jurisdiction; however, the Department believes that the City's monitoring program addresses the upstream discharges. No changes were made to the draft Permit based on this comment.

Comment (3): Finally, although the Huntsville Spring Branch is on the 2018 Alabama Draft 303(d) list for arsenic from urban runoff/storm sewers, Huntsville is not monitoring for arsenic.[15] The permit requires an instream monitoring program for any additional parameters attributed with the latest final 303(d) list. Arsenic must be added to the monitoring list. Additionally, Aldridge Creek has a TMDL for dissolved oxygen, yet dissolved oxygen is not being monitored.[16] Dissolved oxygen should also be added to the instream monitoring program.

Response (3): Comment noted. The City has been monitoring Huntsville Spring Branch for water quality parameters. At this time, the Department is in the process of determining the source of the arsenic impairment as arsenic can be naturally occurring. Depending upon the results of the arsenic sampling, Huntsville Springs Branch may be delisted. However, if it is not delisted, the Department will require the Permittee to determine whether the discharge from any part of the MS4 contributes directly or indirectly to the arsenic impairment in Huntsville Spring Branch as required by Part II.E.1 of the draft Permit. Regarding your comment concerning Aldridge Creek dissolved oxygen (DO), Part III.B.1.i. of the draft Permit requires the City to monitor DO for Aldridge Creek semi-annually. No changes were made to the draft Permit based on this comment.

References cited in the comments:

11 40 C.F.R. § 122.26(d)(2)(i)(F).

12 Letter from Robert L. Willis, U.S. Fish and Wildlife Service, to Bill Carwile, Alabama Highway Department (Dec. 4, 1989) (concerning proposed Weatherly Road Extension and Huntsville South Bypass).

13 U.S. Dept. of Transportation, Federal Highway Administration, Draft Environmental Impact Statement: Projects M-8508(1) and ST-697-7 Southern By-Pass and Weatherly Road Extension Hobbs Island Road to I-565 City of Huntsville and Madison County, Alabama, 1992.

14 *Id.*

15 ADEM draft 2018 303(d) list, http://www.adem.state.al.us/programs/water/wquality/Draft2018AL303dList.pdf

16 ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, Water Quality Branch, Water Div., TMDL Development for Aldridge Creek (2002), http://adem.alabama.gov/programs/water/wquality/tmdls/FinalAldridgeCreekOEDOTMDL.pdf

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Appendix C Ordinances

DIVISION 2. - NPDES COMPLIANCE

Subdivision I. - In General

Sec. 21-331. - Definitions.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

ADEM means the Alabama Department of Environmental Management.

BMPs and *best management practices* mean schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the discharge of pollutants to the municipal separate storm sewer system. BMPs also include treatment requirements, operating procedures and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

Clean Water Act means the Federal Clean Water Act, 33 USC 1251 et seq., and regulations promulgated under that act.

Commercial area means any facility associated with commercial activity which is not subject to its own NPDES permit or an ADEM general stormwater permit.

Director means the manager of the division of natural resources and environmental management of the city or his designated representative.

Discharge and *discharge of a pollutant* mean any addition of any pollutant to the municipal separate storm sewer system. This term does not include an addition of pollutants by any indirect discharger or from any source specifically excluded from the definition of point source.

Discharge monitoring report and *DMR* mean the EPA or ADEM uniform form for the reporting of self-monitoring results by NPDES permittees.

EPA means the Federal Environmental Protection Agency.

High-risk facility means municipal landfills; other treatment, storage or disposal facilities for municipal waste (e.g., transfer stations, incinerators, etc.); and hazardous waste treatment, storage, disposal and recovery facilities.

Holder means a person to whom a BMP plan approval has been issued.

Illicit discharge means any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer system) and discharges from firefighting and emergency management activities.

Indirect discharger means a nondomestic discharger introducing pollutants to a publicly owned treatment works.

Industrial facility means any facility associated with industrial activity.

Municipal separate storm sewer system means a conveyance or system of conveyances (including roads with drainage systems, streets, catchbasins, curbs, gutters, ditches, manmade channels, or storm drains), which is owned or operated by the city, designed or used for collecting or conveying stormwater, and is neither a POTW nor a combined sewer.

NPDES and *National Pollutant Discharge Elimination System* mean the national permitting program implemented under the Clean Water Act.

Person responsible and *responsible person* mean a person who has or represents having:

(1) An ownership interest in or financial or operational control of a source or potential source of a discharge or a discharge regulated by this article;

(2) Possession or control of a source or potential source of a discharge regulated by this article who directly or indirectly allowed, either by act or omission, a discharge regulated by this article; or

(3) Benefited from a source or potential source of a discharge or a discharge regulated by this article.

There may be one or more persons responsible or responsible persons.

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 discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954 (42 USC 2011 et seq.), as amended), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, domestic and agricultural waste discharged into water.

Publicly owned treatment works and *POTW* mean any device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature which is owned by the city. This definition includes sewers, pipes or other conveyances only if they convey wastewater to a POTW providing treatment.

Significant materials includes, but is not limited to the following:

(1) Raw materials;

(2) Fuels;

(3) Materials such as solvents, detergents and plastic pellets;

(4) Finished materials such as metallic products;

(5) Raw materials used in food processing or production;

(6) Hazardous substances designated under section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), 42 USC 9601 et seq.;

(7) Any chemical the facility is required to report pursuant to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), 42 USC 11023(b);

(8) Fertilizers;

(9) Pesticides; and

(10) Waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

Stormwater means stormwater runoff, snow melt runoff, and surface runoff and drainage.

Stormwater discharge associated with industrial activity means the same as in the Clean Water Act and regulations promulgated under that act.

Stormwater discharge from sites of industrial activity means stormwater discharges from industrial facilities that are subject to section 313 of title III of SARA or that have significant materials, raw materials, material handling equipment or activities, intermediate products or industrial machinery exposed to stormwater, except for those industrial facilities which possess their own NPDES permit or are subject to an ADEM general stormwater permit. In addition, this definition also shall include industrial facilities that the director determines are contributing a substantial pollutant loading to the municipal separate storm sewer system.

To the extent practicable, when used in reference to terms and conditions of NPDES permits (other than the NPDES permit issued to the city) and procedures and methods established by federal regulation, means that the director shall defer to these terms, conditions, procedures and methods so long as the city's compliance with its own NPDES permit, or federal or state law is not jeopardized in any manner.

Water Pollution Control Act means the Alabama Water Pollution Control Act of 1972, Code of Ala. 1975, § 22-22-1 et seq., and regulations promulgated under that act.

(Ord. No. 98-3, § 2, 2-12-1998)

Cross reference— Definitions generally, § 1-2.

Sec. 21-332. - Intent.

This division is enacted to preserve, protect and promote the health, safety and welfare of the citizens of the city through the reduction, control and prevention of the discharge of pollutants to the city municipal separate storm sewer system. It is the expressed intent of the city council in enacting this division to provide for and promote compliance by the city with federal and state laws governing the discharge of pollutants from the municipal separate storm sewer system and to provide for and promote compliance with an NPDES permit issued to the city for such discharge. The city does not intend for this division to conflict with any existing federal or state law.

(Ord. No. 98-3, § 1, 2-12-1998)

Sec. 21-333. - Penalties.

Any person who violates any provision of this division or any provision of a BMP plan approval issued under this division shall be guilty of a violation and, upon conviction, shall be punished as provided by law, including those penalties set forth in Code of Ala. 1975, § 11-45-9.

(Ord. No. 98-3, § 20, 2-12-1998)

Sec. 21-334. - Exemption.

The provisions of section 21-340 and subdivision II of this division shall not apply to a discharge or activity specifically authorized by an NPDES permit.

(Ord. No. 98-3, § 16, 2-12-1998)

Sec. 21-335. - Existing authorities.

(a) Nothing in this division shall be construed to limit the existing authority of the city to enforce rules and regulations regarding:

(1) Charges, limits and restrictions on the discharge of waste into the sanitary sewer system;

(2) Requirements of the stormwater management manual of the city;

(3) Health or sanitation ordinances of the city enforced by the county health department; or

(4) Ordinances governing the sanitation of premises where animals are kept.

(b) This division shall be cumulative to and in furtherance of any statutory common law, or other legal right, duty, power or authority possessed by the city. Compliance with this division or a BMP plan approval issued under this division shall not excuse any person from compliance with any other federal, state or local law, ordinance, regulation, rule or order.

(Ord. No. 98-3, § 21, 2-12-1998)

Sec. 21-336. - Discharge prohibitions.

(a) The illicit discharge of pollutants to the municipal separate storm sewer system by any person is prohibited.

(b) The discharge of pollutants to the municipal separate storm sewer system from sites of industrial activity and high-risk facilities is prohibited except as authorized by a BMP plan approval issued by the director pursuant to section 21-351. The discharge of pollutants to the municipal separate storm sewer system by discharging stormwater associated with industrial activity is prohibited except as authorized by an NPDES permit. 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 in compliance with the provisions of this division which relate to such discharge.

(c) The spilling, dumping or disposal of materials other than stormwater to the municipal separate storm sewer system is prohibited. The spilling, dumping or disposal of materials other than stormwater in such a manner as to cause the discharge of pollutants to the municipal separate storm sewer system is also prohibited.

(Ord. No. 98-3, § 3, 2-12-1998)

Sec. 21-337. - Exceptions to prohibition.

The following discharges are specifically excluded from the prohibitions included in section 21-336:

(1) Water line flushing (including fire hydrant testing).

(2) Landscape irrigation.

(3) Diverted streamflows.

(4) Rising groundwaters.

(5) Uncontaminated groundwater infiltration.

(6) Discharges from potable water sources.

(7) Foundation drains.

(8) Air conditioning condensation.

(9) Irrigation water.

(10) Springs.

(11) Water from crawl space pumps.

(12) Footing drains.

(13) Lawn watering.

(14) Individual residential car washing.

(15) Flows from riparian habitats and wetlands.

(16) Dechlorinated swimming pool discharges.

(17) Street wash water.

(Ord. No. 98-3, § 4, 2-12-1998)

Sec. 21-338. - Inspection and monitoring of discharges.

(a) The director may enter and inspect any private property or premises, including but not limited to any private property or premises which is or may be the source of a stormwater discharge associated with industrial activity, or the source of a discharge from a site of industrial activity, or the source of a discharge from a high-risk facility, or the source of an illicit discharge, upon reasonable notice to the person owning the property or premises and the person in possession and during normal business hours, for the purpose of performing investigations regarding the existence and source of contamination and determining from the person responsible for such property or premises or other appropriate individual the methods which are being or will be employed to stop, neutralize, remove or otherwise remedy the contamination, and, as needed, to determine compliance or noncompliance with this division or with the conditions of a BMP plan approval issued pursuant to section 21-351. No person shall refuse entry or access to the director or his authorized representative when he requests entry for the purpose of inspection and presents appropriate credentials. If requested, the person responsible for such property or premises shall receive a report from the director setting forth the findings of the inspection with respect to compliance status.

(b) The director may require the person responsible for any private property or premises, including but not limited to any private property or premises which is or may be the source of a stormwater discharge associated with industrial activity, or the source of a discharge from a site of industrial activity, or the source of a discharge from a high-risk facility, or the source of an illicit discharge, at that person's expense, to establish and maintain such records, make such reports, install, use and maintain such monitoring equipment or methods, sample such discharge in accordance with such methods, at such locations, and intervals as the director shall prescribe, and provide periodic reports relating to the discharge. To the extent practicable, the director shall recognize and approve the sampling procedures and test methods established by 40 CFR 136.

(Ord. No. 98-3, § 5, 2-12-1998)

Sec. 21-339. - Best management practices.

All industrial facilities and high-risk facilities are required to implement, at their own expense, structural and nonstructural BMPs, as appropriate, to prevent the discharge of pollutants to the municipal separate storm sewer system. Further, the director may require any person responsible for property or premises which is or may be the source of a discharge from a site of industrial activity, or the source of a discharge from a high-risk facility, or the source of an illicit discharge, to implement, at that person's expense, additional structural and nonstructural BMPs, as provided in sections 21-351—21-358, to prevent the discharge of pollutants to the municipal separate storm sewer system. To the extent practicable, the director shall recognize and approve the use of appropriate BMPs described or referenced in one or more of the NPDES general permits issued by the ADEM authorizing the discharge of stormwater associated with industrial activity. To the extent practicable, the director shall recognize that storage and handling of significant materials, material handling equipment or activities, intermediate products or industrial machinery in such a manner that they are not exposed to stormwater is an effective BMP. 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 in compliance with the provisions of this section.

(Ord. No. 98-3, § 6, 2-12-1998)

Sec. 21-340. - Good housekeeping practices required.

Commercial areas and industrial facilities shall employ good housekeeping practices to prevent debris such as cigarette butts, paper, bottles, cans, plastic, etc., from entering the municipal separate storm sewer system from areas such as parking lots, loading zones, sidewalks, trash cans and dumpster sites. It shall be unlawful for any person to discharge chemicals, waste products or any pollutant to the parking lot or grounds of a commercial area or an industrial facility.

(Ord. No. 98-3, § 7, 2-12-1998)

Sec. 21-341. - Providing false information and tampering prohibited.

(a) It shall be unlawful for any person to provide false information to the director or anyone working under the director's supervision when such person knows or has reason to know that the information provided is false, whether such information is required by this division, any BMP plan approval granted under this division, or any inspection, recordkeeping or monitoring requirement carried out or imposed under this division.

(b) It shall be unlawful for any person to falsify, tamper with or knowingly render inaccurate any monitoring device or method required under this division or a BMP plan approval issued under this division.

(Ord. No. 98-3, § 18, 2-12-1998)

Sec. 21-342. - Method of enforcement.

The director, any person acting under his supervision, and sworn law enforcement officers of the city are authorized to issue citations to appear in municipal court to answer charges of violation of any of the provisions of this division. In no event shall any enforcement action under this division be taken for an alleged violation of this division if any of the following conditions exist:

(1) The ADEM has issued a notice of violation with respect to the same violation and is proceeding with enforcement action;

(2) The ADEM has issued an administrative order with respect to the same alleged violation and is proceeding with enforcement action; or

(3) The ADEM has commenced and is proceeding with enforcement action or has completed any other type of administrative or civil action with respect to the same alleged violation;

however, enforcement action under this division may be pursued for continued or continuing violations, and each day that a violation of this division continues shall be considered a separate violation.

(Ord. No. 98-3, § 19, 2-12-1998)

Secs. 21-343—21-350. - Reserved.

Subdivision II. - Best Management Practices (BMP) Approval

Sec. 21-351. - Application.

(a) Whenever stormwater will be discharged into the municipal separate storm sewer system from a site of industrial activity or a high-risk facility, the person responsible for such site of industrial activity, high-risk facility or discharge, except as such site, high-risk facility or discharge may be expressly excepted from coverage of this division, shall submit an application for BMP plan approval to the director. The application shall be submitted to the director within 60 days of this division's effective date for discharges from sites of industrial activity or high-risk facilities existing or commencing within 60 days of this division's effective date and thereafter at least 30 days prior to the date of any discharge from a site of industrial activity or high-risk facility unless an extension is authorized by the director. The application shall be submitted on forms provided by the director and include any information requested by the director which may be required to describe the discharge or determine the propriety and sufficiency of BMPs to be employed. An application fee of $25.00 shall be paid to the city for each application at the time the application is submitted and shall be nonrefundable.

(b) Upon receipt, and after investigation, of information that pollutants are or may be being discharged to the municipal separate storm sewer system from a site of industrial activity, a high-risk facility or a commercial area, the director shall request, in writing, that the person responsible for such site of industrial activity, high-risk facility, or commercial area which is, or could be, the source of discharge submit an application and the person shall submit the application on forms provided by the director. Such application shall include any information requested by the director which may be required to describe the discharge or determine the propriety and sufficiency of BMPs to be employed. Such application shall be submitted to the director not more than 30 days from receipt of the written request unless an extension is authorized by the director. An application fee of $25.00 shall be paid to the city for each application at the time the application is submitted and shall be nonrefundable.

(Ord. No. 98-3, § 8, 2-12-1998)

Sec. 21-352. - Granting and denial of BMP plan approval.

(a) Upon receipt of an application, the director shall issue a notice of BMP plan approval, setting forth the terms and conditions under which the discharge of pollutants to the municipal separate storm sewer system can occur, unless one or more of the following circumstances is found to exist:

(1) The application is incomplete in a material respect;

(2) The application contains false information;

(3) The application relates to an area or subject matter not covered by this division;

(4) The applicant has failed to submit the requisite application fee;

(5) The applicant has a substantial record of noncompliance with this division or a BMP plan approval issued under this division and has made no reasonable effort to rectify the circumstances or conditions which resulted in the record of noncompliance;

(6) No terms or conditions, including BMPs or other precautions, or combination, required under a BMP plan approval will satisfactorily control the quality of stormwater discharged by the applicant into the municipal separate storm sewer system;

(7) A BMP plan approval previously issued to the applicant was revoked on grounds of substantial noncompliance with this division or a BMP plan approval issued under this division; or

(8) For any other reason if, in the judgment of the director, the issuance of a BMP plan approval is not consistent with the purposes of this division.

(b) Terms and conditions imposed by a BMP plan approval issued under subsection (a) of this section may include, at the holder's expense, the following:

(1) Institution and installation of site-specific monitoring, recordkeeping, and reporting requirements and BMPs;

(2) Submission to inspection requirements, compliance schedules, applicable requirements under federal, state or local laws, regulations, orders or standards;

(3) Limitations on the character or amount of certain pollutants or the characteristics of stormwater discharged into the municipal separate storm sewer system; or

(4) Other terms and conditions as deemed appropriate by the director to ensure compliance with this division or the city's NPDES permit.

(c) If an application is denied, the director shall provide written notice of denial of a BMP plan approval, including the reasons for denial and a statement of the appeal procedure in section 21-358 to the applicant within ten days of the denial. The notice of denial shall be delivered by certified mail/return receipt requested at the address of the responsible person set forth in the application. Denial of a BMP plan approval may be appealed in accordance with the provisions of section 21-358.

(Ord. No. 98-3, § 9, 2-12-1998)

Sec. 21-353. - Term of BMP plan approval.

A BMP plan approval issued under this division shall be for a term of three years. Any holder wishing to continue to discharge to the municipal separate storm sewer system beyond the term of a BMP plan approval shall submit an application for renewal of BMP plan approval, on forms provided by the director, at least 60 days prior to the expiration of the BMP plan approval. If the director does not issue a notice of renewal of BMP plan approval prior to the expiration date due to circumstances beyond the control of the holder, the standards and requirements set forth in the expiring BMP plan approval shall remain in full force and effect until such notice of renewal is issued by the director. An expiring BMP plan approval shall not be renewed unless its terms and conditions continue to adequately address the concerns set forth in this division.

(Ord. No. 98-3, § 10, 2-12-1998)

Sec. 21-354. - BMP plan approvals nonassignable.

BMP plan approvals are granted to a specific holder for a specific site of industrial activity, high-risk facility or commercial area. The BMP plan approvals do not constitute a property interest and shall not be assigned, conveyed, transferred or sold. A BMP plan approval granted under this division shall be null and void upon attempted assignment, conveyance, transfer or sale.

(Ord. No. 98-3, § 11, 2-12-1998)

Sec. 21-355. - Modifications to BMP plan approvals.

A BMP plan approval issued under this division may be modified in order to comply with any federal, state or local law, regulation, order or standard, or when, in the opinion of the director, a modification is necessary to accurately control changes in the character or amount of pollutants or the characteristics of stormwater discharged into the municipal separate storm sewer system, or any other applicable condition. A holder shall be given a 30-day notice of the impending modification. Deadlines for compliance with the modified requirements shall be determined on a case-specific basis.

(Ord. No. 98-3, § 12, 2-12-1998)

Sec. 21-356. - Grounds for revocation of a BMP plan approval.

(a) The director may revoke a BMP plan approval issued under section 21-352 if he determines that one or more of the following conditions exist:

(1) The holder provided false information in obtaining BMP plan approval;

(2) The holder provided false information with respect to any monitoring, recordkeeping or reporting requirements or BMPs imposed under this division or a BMP plan approval;

(3) The holder is convicted of violating the provisions of this division;

(4) Any term or condition imposed under a BMP plan approval was not satisfied within the timeframe specified in the BMP plan approval;

(5) Any federal, state or municipal statute, law, ordinance, regulation, order or standard is being violated by the holder;

(6) The holder has refused entry to the director for purposes of inspection or monitoring; or

(7) For any other reason if, in the judgment of the director, the continuance of a BMP plan approval is not consistent with the purposes of this division.

(b) Whenever the director determines that grounds exist for revocation of a BMP plan approval, the director shall serve upon the holder a written notice of proposed revocation, stating the facts or conduct which warrant revocation of the BMP plan approval, and providing the holder with an opportunity to demonstrate or achieve compliance with all lawful requirements by submitting to the director, within ten days of the date of the notice of proposed revocation, written or demonstrative evidence of satisfactory compliance or a written plan for achieving satisfactory compliance.

(c) If the holder fails to respond to a notice of proposed revocation or fails to provide adequate evidence of satisfactory compliance or an adequate written plan for achieving satisfactory compliance, the director shall order the holder to show cause at a hearing why the proposed revocation should not occur. The director shall deliver to the holder a notice of show cause hearing, specifying the time and place of the hearing to be held before the director, the purpose of the hearing, the reasons for the proposed revocation, and directing the holder to show cause why the proposed revocation action should not occur. The notice of show cause hearing shall be delivered to the holder by certified mail/return receipt requested at least ten days before the hearing.

(d) If after the hearing the director determines that the BMP plan approval is due to be revoked, the director shall deliver, by certified mail/return receipt requested, a written notice of revocation to the holder. The notice of revocation shall be effective immediately and shall include a statement of the reasons for revocation and the appeal procedure set forth in section 21-358.

(Ord. No. 98-3, § 13, 2-12-1998)

Sec. 21-357. - Emergency suspension of BMP plan approval.

(a) Notwithstanding any other provision of this division, the director may, without notice or hearing, suspend a BMP plan approval issued under this division by delivery to the holder, by hand delivery, certified mail/return receipt requested, or the posting in at least three conspicuous places at the site subject to the BMP plan approval, of a notice of emergency suspension of BMP plan approval. A BMP plan will be suspended under this section only when such suspension is necessary, in the opinion of the director, to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons or to the environment, or causes interference with the municipal separate storm sewer system or causes the city to violate any condition of its NPDES permit. The notice of emergency suspension of BMP plan approval shall state the grounds for suspension, the corrective action necessary for reinstatement of the BMP plan approval, and a statement of the appeal procedure in section 21-358.

(b) Any holder notified of suspension of a BMP plan approval under this section shall immediately stop activity conducted pursuant to the BMP plan approval. The director shall reinstate the BMP plan approval upon proof of the elimination of the endangering discharge or circumstances.

(c) Emergency suspension of a BMP plan approval may be appealed in accordance with the provisions of section 21-358.

(Ord. No. 98-3, § 14, 2-12-1998)

Sec. 21-358. - Appeal of denial, revocation or suspension of BMP plan approvals.

A person denied a BMP plan approval required by this division or a holder whose BMP plan approval under this division is revoked or suspended may appeal the decision of the director to the stormwater management board in the manner provided in this section. The appellant may commence the appeal by filing a written notice of appeal, specifying the grounds for the appeal, with the director and the stormwater management board within 15 days following receipt of the director's notice of denial, notice of revocation, or notice of suspension. The stormwater management board shall hear and decide such appeal within 14 days following its receipt of the notice of appeal. The director and appellant shall be notified, in writing by certified mail/return receipt requested at the address of the director and the responsible person or holder, as set forth in the application or BMP plan approval, respectively, of the date and time of such hearing at least five days prior to the scheduled date of the hearing. At the hearing, the director shall state his grounds for denying, revoking or suspending the BMP plan approval and shall provide any evidence supporting such denial, revocation or suspension. The appellant may appear in person or be represented by counsel. Evidence on the appellant's behalf may be presented at such hearing. The stormwater management board shall affirm the director's decision if any reason for his denial, revocation or suspension is a valid ground, as set forth in section 21-352, 21-356 or 21-357, respectively, and the existence of such ground is supported by a preponderance of the evidence. The decision of the stormwater management board shall be by concurring vote of four members of the stormwater management board with a quorum present and shall either sustain the decision of the director or reverse or vary the decision of the director, specifying the manner in which any variations shall be made, the conditions upon which they are to be made and the reasons. In the absence of a concurring vote of four members of the stormwater management board, the decision of the director shall stand. The director and the appellant shall be notified in writing of the stormwater management board's decision within five days of the close of the hearing by certified mail/return receipt requested at the address of the director and the responsible person or holder, as set forth in the application or BMP plan approval. Every decision of the stormwater management board shall be final, subject, however, to such remedy as any aggrieved party may have at law or in equity. Every decision shall indicate the vote of each member of the stormwater management board and shall be entered into the board's minutes and filed in the office of the director.

(Ord. No. 98-3, § 15, 2-12-1998)

Sec. 21-359. - Noncompliance with terms or conditions of a BMP plan approval prohibited.

It shall be unlawful to refuse or fail to comply with the terms or conditions of a BMP plan approval issued under this division.

(Ord. No. 98-3, § 17, 2-12-1998)

ARTICLE VI. - STORMWATER MANAGEMENT[8]

Footnotes:

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Cross reference— Stormwater management manual adopted, § 12-1; sewers, sewage disposal and other wastewater disposal, ch. 21; utilities, ch. 26.

DIVISION 1. - GENERALLY[9]

Footnotes:

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Editor's note— Ord. No. 15-951 , § 1, adopted Jan. 14, 2016, amended Div. 1 in its entirety to read as herein set out. Former Div. 1, §§ 12-331—12-335, pertained to similar subject matter. For prior history, see Code Comparative Table.

Sec. 12-331. - Definitions.

Unless specifically defined in this section or in chapter 21, article III, words or phrases used in this article shall have their common dictionary definitions or meanings they have in common usage.

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 independent perimeter loadbearing walls is new construction.

Area of shallow flooding means a designated AO zone on the flood insurance rate map (FIRM) with base flood depths from one to three feet 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 means the land in the floodplain subject to a one percent or greater chance of flooding in any given year.

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 having a roof supported by columns or by walls.

Channel means a natural or artificial watercourse of perceptible extent with definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow is that water which is flowing within the limits of the defined channel.

City engineer means the city engineer or his authorized representative.

Cut means a portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to the excavated surface.

Detention means the temporary delay of storm runoff prior to discharge into receiving waters.

Developer means any individual, firm, corporation, association, partnership or trust involved in commencing proceedings to effect development of land for himself or others.

Development means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials.

Director of natural resources means the manager of the division of natural resources and environmental management of the city, or his designated representative.

Drainage basin means a part of the surface of the earth that is occupied by and provides surface water runoff into a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Erosion means the disintegration or wearing away of soil by the action of water.

Excavation means the same as the term "Cut."

Fill means or portion of land surface or area to which soil, rock or other materials have been or will be added; the height above original ground surface after the material has been or will be added.

Flood and *flooding* mean a temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood insurance study means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the flood boundary floodway map and the water surface elevation of the base flood.

Floodway means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floodway fringe means that portion of the floodplain lying outside the floodway.

Floor means the top surface of an enclosed area in a building (including basement), i.e., top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

Grading means any operation or occurrence by which the existing site elevations are changed; or where any ground cover, natural or manmade, is removed; or any watercourse or body of water, either natural or manmade, is relocated on any site, thereby creating an unprotected area. This includes stripping, cutting, filling, stockpiling or any combination, and shall apply to the land in its cut or filled condition.

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

Impervious surface means any ground or structural surface that water cannot penetrate or through which water penetrates with great difficulty.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage and in an area other than the basement area, is not considered a building's lowest floor, provided that such an

enclosure is not built so as to render the structure in violation of the requirements of this article or of the regulations and technical guidelines promulgated pursuant to this article.

Retention means the prevention of storm runoff from direct discharge into receiving waters. Examples include systems which discharge through percolation, exfiltration, filtered bleed-down and evaporation processes.

Sediment means solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water or gravity as a product of erosion.

Site means all contiguous land and bodies of water in one ownership, graded or proposed for grading or development as a unit, although not necessarily at one time.

Slope means degree of deviation of a surface from the horizontal, usually expressed in percent or ratio.

Start of construction means the actual start of the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include 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 accessory buildings, such as garages or sheds, not occupied as dwelling units or not part of the main structure.

Stripping means any activity that removes or significantly disturbs the vegetative surface cover, including clearing and grubbing operations.

Structure means any combination of materials, including buildings constructed or erected, the use of which requires location on or in the ground or attachment to anything having location on the ground, including but not limited to buildings, towers, carports, signs, billboards and fences, but not including telephone poles and overhead wires, fences less than three feet high, retaining walls or terraces.

Substantial improvement means any combination of repairs, reconstruction, alteration or improvements to a structure, taking place during the life of a structure, in which the cumulative cost equals or exceeds 50 percent of the market value of the structure. The market value of the structure should be the appraised value of the structure prior to the start of the initial repair or improvement or in the case of damage, the value of the structure prior to the damage occurring. For the purposes 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 structure. The term does not, however, include any project for improvement of a structure required to comply with existing health, sanitary or safety code specifications which are solely necessary to ensure safe living conditions.

Watercourse means a channel, natural depression, slough, gulch, stream, creek, pond, reservoir or lake in which storm runoff and floodwater flows either regularly or infrequently. This includes major drainageways for carrying urban storm runoff.

(Ord. No. 15-951, § 1, 1-14-2016)

Sec. 12-332. - Purpose; stormwater management manual; conditions.

(a) It is the purpose of this article to control stormwater drainage facilities and land disturbance activities within the corporate limits of the city so as to promote the public health, safety and general welfare through provisions designed to:

(1) Protect human life and health.

(2) Reduce expenditure of public money for flood control projects.

(3) Reduce the need for rescue and relief efforts associated with flooding.

(4) Provide for the sound use and development of floodprone areas so as to maximize beneficial use without increasing flood hazard potential.

(5) Reduce damage to public facilities and utilities such as water and sewer lines; electric, telephone and gas facilities; and streets and bridges located in floodplains.

(6) Ensure a functional stormwater drainage system that will not result in excessive maintenance costs.

(7) Encourage the improvement of existing flooding problems in conjunction with new development.

(8) Encourage the use of natural and aesthetically pleasing design.

(9) Reduce the impact on public and private property caused by the accumulation of mud, dirt, water, debris and other construction materials.

(b) In addition, it is the purpose of this article to provide a mechanism for appeals initiated under section 21-358.

(c) The stormwater management manual of the city department of public works services ("stormwater management manual") referenced and adopted in section 12-1 of this chapter is hereby incorporated into this article by reference and when reference is made to this article it shall mean and include the stormwater management manual, its regulations, standards, and technical guidelines.

(d) Where, under the authority of this article, the city engineer subjects the issuance of a building permit, grading permit, or certificate of occupancy to certain conditions, those conditions shall be included as a requirement of this article and a violation of those conditions is a violation of this article.

(Ord. No. 15-951, § 1, 1-14-2016)

Sec. 12-333. - Penalties and injunctions.

(a) A violation of this article shall be punishable as provided in section 1-7.

(b) In addition to all other remedies provided by law, the city shall have the right to injunctive relief for any violation of this article.

(Ord. No. 15-951, § 1, 1-14-2016)

Sec. 12-334. - Authority of city engineer.

(a) The city engineer shall have the authority to administer and enforce this article on behalf of the city.

(b) The city engineer shall have the authority to issue grading permits as required under this article. Any grading permit exemption authorized by the city engineer under this article shall not be construed as relieving the party responsible for the identified activity from making on-site drainage improvements that may be required or from compliance with the zoning ordinance of the city or any other applicable laws or regulations.

(c) The city engineer shall have the authority to review all building permit applications prior to their issuance by the inspection division to ensure compliance with the provisions of this article. Building permit applications are exempted from review by the city engineer if the structure which is the subject of such application is to be remodeled within its existing walls and no grading is to occur on the site or is a residential dwelling on a single lot within an approved subdivision with an approved grading plan that establishes the stormwater drainage pattern for the site. No building permit, unless exempted as indicated in this article, shall be issued by the inspection division until an application for such building permit has been approved by the city engineer. The exemptions listed in this article shall not be construed as relieving the party responsible for the identified activity from on-site drainage improvements that may be required in accordance with adopted building and construction codes or from compliance with the zoning ordinance of the city or any other applicable laws or regulations.

(d) The city engineer is authorized to enter upon the premises of any land within the city for which a grading or building permit application has been filed to inspect the site before, during and upon conclusion of any land disturbance activity to determine compliance with this article.

(e) In cases where the city engineer is authorized to review building permits prior to issuance or has issued a grading permit, a certificate of occupancy shall not be issued until the city engineer has determined compliance with this article.

(f) The city engineer, or an employee of his department designated by him, is authorized to issue a citation to any person found by him to be in violation of this article, including the stormwater management manual. The citation shall order the person to appear in the municipal court at a date and time certain to answer the charges against him.

(g) The city engineer is authorized to issue a stop work order with regard to any grading or other land disturbance activity that is being done contrary to the provisions of this article or in a dangerous or unsafe manner. Such notice shall be in writing, shall be delivered to the owner of the property, his agent, or the person doing the work, and shall state the conditions under which work may be resumed.

(Ord. No. 15-951, § 1, 1-14-2016)

Sec. 12-335. - Stormwater management manual standards.

In the enforcement and administration of this article, the city engineer shall apply the standards set forth in section 2.1.1 of the stormwater management manual.

(Ord. No. 15-951, § 1, 1-14-2016)

Sec. 12-336. - Grading without a grading plan.

(a) Development of a site shall conform to the stormwater discharge pattern established in an existing grading plan that includes the site, unless a deviation from such plan is required or allowed by the city engineer in accordance with this article, including the stormwater management manual. Deviations from the established drainage pattern shall require the approval of the city engineer before the issuance of a building permit in accordance with this article, including the stormwater management manual. It shall be a violation of this article for the holder of a building permit or grading permit to fail to follow the established drainage pattern for the site or the approved deviations. The city engineer may withhold approval of the issuance of a certificate of occupancy until either the established drainage pattern or the approved deviations are met.

(b) For construction that includes grading and where there is no grading plan in place that establishes the stormwater discharge pattern for the site, the city engineer may condition the building permit to include requirements designed to carry stormwater discharge to public drainage easements or facilities, or to private drainage easements or facilities that are designed and authorized to accommodate said drainage. The building permit holder shall grade the site to conform to such required conditions. The city engineer may withhold approval of the issuance of a certificate of occupancy until such required conditions have been met.

(Ord. No. 15-951, § 1, 1-14-2016)

Sec. 12-337. - Surface stabilization measures on sites not regulated under a grading permit.

(a) When used in this section, the following words, terms, and phrases shall have the following meanings:

Graded site means: (1) a site with grading that is under an active building permit, (2) a site being graded in preparation for construction prior to the issuance of a building permit, or (3) a site with grading where the building permit has expired prior to completion of construction. The term includes public and private easements and rights-of-way located on or immediately adjacent to the site.

Inclement weather period means a prolonged period of heavy rain, high winds, frost or similar weather conditions that render installing permanent stabilization measures unattainable due to such conditions.

Permanent stabilization measures mean maintaining a graded site with a full stand of grass, allowed impervious surface, or other approved permanent stabilization measures.

Person in control means, where there is no active building permit, the owner or person in possession or control of the graded site, and, where there is an active building permit, the holder of a building permit issued for construction on the graded site.

Surface stabilization measures mean maintaining a graded site with either permanent stabilization measures in place or temporary stabilization measures in place, or both.

Temporary stabilization measures mean maintaining a graded site with straw, seed, silt fencing, or other approved temporary stabilization measures.

(b) *Coverage of section* . This section is intended to govern graded sites that are not being regulated under an active grading permit. Nothing in this article shall be construed to relieve any person from

complying with other applicable federal, state, and local laws, including, but not limited to, landscaping requirements under the city's zoning ordinance, foundation drainage requirements under the city's building code, and federal and state environmental regulations, including NPDES permitting requirements.

(c) *Surface stabilization for graded sites* . It shall be a violation of this article for the person in control of a graded site to fail to maintain, in good condition, order, and repair, surface stabilization measures in place on the site that prevent mud, dirt, water, debris and other construction materials from being washed, blown or otherwise deposited on adjacent public or private property, including, without limitation, public rights-of-way.

(d) *Surface stabilization required prior to issuance of certificate of occupancy* .

(1) Subject to subsection (2) below, as a condition to the issuance of a certificate of occupancy after completion of construction on a graded site, the building permit holder shall have permanent stabilization measures in place on the graded site as may be approved by the city engineer.

(2) During an inclement weather period the building permit holder may apply with the city engineer for a waiver from the foregoing permanent stabilization requirement. The city engineer, in her sole discretion, may approve the waiver, subject to each of the following conditions:

a. Permanent stabilization measures shall be in place on that portion of the graded site that has public easements and rights-of-way.

b. Temporary stabilization measures shall be in place on the remainder of the graded site.

c. Within three months from the date of the issuance of the certificate of occupancy the applicant for the waiver shall be responsible for having full stabilization measures in place on the site and, failing therein, said applicant shall be in violation of this article.

(Ord. No. 15-951, § 1, 1-14-2016)

Secs. 12-338—12-360. - Reserved.

DIVISION 2. - STORMWATER MANAGEMENT BOARD[10]

Footnotes:

--- (10) ---

Cross reference— Boards, commissions, committee and authorities, § 2-1291 et seq.

Sec. 12-361. - Created.

The city stormwater management board is created.

(Ord. No. 91-87, § 6(a), 6-13-1991)

Sec. 12-362. - Members.

(a) The stormwater management board shall consist of five members appointed by the mayor and approved by a majority vote of the city council.

(b) Each member shall be appointed for a term of three years, except that in the first instance one member shall be appointed for a term of three years, two for a term of two years and two for a term of one year; and thereafter each member appointed shall serve for a term of three years or until a successor is duly appointed. In addition to the five regular members provided for in this subsection, two alternate members shall be appointed, in like fashion, as the regular members, to serve on such board at the call of the chairman only in the absence of regular members and while so serving shall have and exercise the power and authority of regular members. Alternate members shall be appointed to serve for three-year terms. All members shall be eligible for reappointment. Two of the regular members and one alternate shall be registered civil engineers. One of the regular members shall be a hydrologist. The remaining two regular members and one alternate shall be appointed from the community at large.

(c) All members shall be residents of the city. No member shall hold an elective office, nor shall any member be an employee of the county or the city. All members shall serve as such without compensation. No member shall exercise the powers and duties delegated to such member by this article in connection with any matter pending before the board in which such member has a pecuniary or direct interest or would be financially affected by the final result.

(d) Members may be removed by the mayor for continued absence from meetings of the board or for other just cause.

(Ord. No. 91-87, § 6(a), 6-13-1991)

Sec. 12-363. - Organization.

Within ten days after its appointment, the stormwater management board shall elect one of its members as chairman and another as vice-chairman. The city engineer shall appoint the secretary to the board who shall be the custodian of the minutes and records of the proceedings of the board.

(Ord. No. 91-87, § 6(b), 6-13-1991)

Sec. 12-364. - Duties and procedure.

The stormwater management board shall adopt such rules and regulations as it may deem necessary to conduct its business. The board shall hear all appeals as provided in this division. The board shall meet at regular monthly intervals with the day and time to be determined by the chairman or as otherwise prescribed in chapter 21, article III. If no appeals have been filed and there is no business pending, the chairman may cancel the meeting at any time after the seventh day before its scheduled date.

(Ord. No. 91-87, § 6(c), 6-13-1991; Ord. No. 98-5, § 3, 2-12-1998)

Sec. 12-365. - Quorum, voting and conflict of interest.

Four members of the stormwater management board shall constitute a quorum. The concurring vote of four members of the board shall be required to reverse any order, requirement, decision or determination of the city engineer or to decide in favor of the applicant on any matter upon which it is required to pass under or to effect any variation in this article or the regulations and technical guidelines adopted pursuant to this article. No member of the board shall vote on any matter in which he has a direct or indirect pecuniary or personal interest. The alternate member, if available, shall replace any member who has a conflict of interest.

(Ord. No. 91-87, § 6(d), 6-13-1991)

Sec. 12-366. - Appeals from decisions of the city engineer.

(a) Appeals to the stormwater management board may be taken by any person aggrieved by a decision of the city engineer arising out of the regulations and technical guidelines promulgated pursuant to this article. A notice of appeal must be filed with the city engineer and the stormwater management board within 15 days after such decision of the city engineer specifying the grounds of appeal. The city engineer shall transmit to the board all papers constituting the record upon which the decision appealed from was taken. The board shall give public notice of the hearing of the appeal, as well as due notice to the parties in interest, and shall decide the matter within a reasonable time.

(b) A decision of the stormwater management board reversing or varying any order, requirement, decision or determination of the city engineer or in favor of the applicant on any matter upon which it is required to pass shall be in writing and shall specify in what manner such variations shall be made, the conditions upon which they are to be made and the reasons for such decision.

(c) Every decision of the stormwater management board shall be final, subject, however, to such remedy as any aggrieved party may have at law or in equity. Every decision shall indicate the vote of each member of the board upon the decision and shall be entered into the board's minutes and filed in the office of the city engineer. A copy of each decision shall be delivered by mail or otherwise to the appellant.

(Ord. No. 91-87, § 6(e), 6-13-1991; Ord. No. 98-5, § 4, 2-12-1998)

Sec. 12-367. - Appeals from decisions of the director of natural resources.

Appeals to the stormwater management board may be taken by any person denied a BMP plan approval or a holder whose BMP plan approval is revoked or suspended under chapter 21, article III, division 2. This appeal shall be commenced and conducted in the manner prescribed in section 21-358.

(Ord. No. 91-87, § 6(f), 6-13-1991; Ord. No. 98-5, § 5, 2-12-1998)

Sec. 12-368. - Powers.

(a) The stormwater management board shall have the following powers:

(1) Hear and decide appeals where it is alleged there is error in any order, requirement, decision or determination made by the city engineer in the enforcement of this article or any regulation or

technical guideline promulgated pursuant to this article or the manager of the natural resources and environmental management division as provided in section 21-358.

(2) Authorize upon appeal from a decision of the city engineer in specific cases such variance from the terms of this article, or any regulation or technical guideline promulgated pursuant to this article, as will not be contrary to the public interest, where owing to special conditions, a literal enforcement of the provisions of this article, or of any regulation or technical guideline promulgated pursuant to this article, will result in unnecessary hardship.

(b) In deciding appeals under subsection (a)(2) of this section, the stormwater management board shall consider all relevant factors, including but not limited to all technical evaluations, all standards specified in the regulations and technical guidelines promulgated pursuant to this article, and the following:

(1) The danger that materials may be swept onto other lands to the injury of others.

(2) The danger to life and property due to flooding or erosion damage.

(3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.

(4) The importance of the services provided by the proposed facility to the community.

(5) The necessity of the facility to a waterfront location, in the case of a functionally dependent facility.

(6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.

(7) The compatibility of the proposed use with existing and anticipated development.

(8) The safety of access to the property in times of flood for ordinary and emergency vehicles.

(9) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.

(10) The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

(c) Upon consideration of the factors listed in this section, and the objectives of this article, the stormwater management board may attach such conditions to the granting of a variance as it deems necessary to further such objectives.

(Ord. No. 98-5, § 6, 2-12-1998)

Secs. 12-369—12-400. - Reserved.

Appendix D Illicit Discharge Detection and Elimination Plan

Illicit Discharge Detection and Elimination Program
June 2019

HUNTSVILLE
The Star of Alabama

City of Huntsville, Alabama
Phase I MS4
NPDES Permit No. ALS000005

Prepared by
S&ME, Inc.

360D Quality Circle NW, Suite 450D
Huntsville, AL 35806

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1.0 Introduction

The Illicit Discharge Detection and Elimination (IDDE) Plan is required by Part II.B.3 of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Permit ALS000005 for discharges from the City of Huntsville municipal separate storm sewer system (Huntsville MS4).

1.1 Huntsville MS4 Area

The City of Huntsville Municipal Separate Storm Sewer System (Huntsville MS4) is defined as the area within the city limits. A map outlining the current corporate boundaries of the City of Huntsville MS4 is included in the SWMPP as **Figure 1**.

At the time of the 2010 Census, the City of Huntsville had a total population of 180,105.

1.2 Storm Sewer System

A Municipal Separate Storm System is defined by 40 CFR Part 122.26(b)(8) to be a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is:

(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 an Indian tribe or an authorized Indian tribal organization, 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) Not a combined sewer; and,

(iv) Not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

1.3 Municipal Separate Storm Sewer Outfalls

An MS4 outfall is defined as a point source where a municipal separate storm sewer discharges to waters of the State. This definition does not include open conveyances connecting two municipal separate storm sewers. Also excluded are pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the State and are used to convey waters of the State.

Waters of the State are defined by Chapter 335-6-10-.02(11) of the ADEM Administrative Code as all waters of any river, stream, watercourse, pond, lake, coastal, or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained

completely upon the property of a single individual, partnership, or corporation, unless such waters are used in interstate commerce.

1.4 Major Outfalls

A major outfall is defined by Part V.X of the Phase I permit to be a municipal separate storm sewer outfall that 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

(4) 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

A map showing identified major outfalls is included as **Figure 6** in Appendix A of the SWMPP.

1.5 Hydrologic Units in the MS4 Area

The Tennessee River is the ultimate receiving water for the Huntsville MS4. The Huntsville MS4 encompasses portions of eighteen (18) subwatersheds, identified in Table 1-3 below.

Table 1-1 Hydrologic Hierarchy

REGION	06	Tennessee
SUBREGION	06-03	Middle Tennessee-Elk
BASIN	06-03-00	Middle Tennessee-Elk
SUBBASIN	06-03-00-02	Wheeler Lake

Table 1-2 HUC 10 Watersheds in the MS4 Area

Watershed	10 Digit HUC
Upper Flint River	06030002-03
Lower Flint River	06030002-04
Huntsville Spring Branch-Indian Creek	06030002-05

Watershed	10 Digit HUC
Limestone Creek	06030002-07
Piney Creek	06030002-08
Tennessee River-Wheeler Lake	06030002-09
Upper Wheeler Lake	06030002-11

Table 1-3 HUC 12 Subwatersheds in the MS4 Area

Subwatershed	12 Digit HUC	Portion of MS4 in Subwatershed (Sq Mi)	% of MS4 In Subwatershed
Banyon Creek-Beaverdam Creek	06030002-03-05	7.10	3.25
Lower Brier Fork Flint River	06030002-03-06	0.10	0.05
Acuff Spring-Flint River	06030002-04-03	10.59	4.84
Goose Creek-Flint River	06030002-04-04	17.85	8.16
Yellow Bank Creek-Flint River	06030002-04-05	6.31	2.89
Upper Indian Creek	06030002-05-01	12.19	5.58
Upper Huntsville Spring Branch	06030002-05-02	35.89	16.42
Barren Fork Creek	06030002-05-04	15.30	7.00
Lower Indian Creek	06030002-05-05	10.00	4.57
Lower Huntsville Spring Branch	06030002-05-05	25.81	11.81
Middle Limestone Creek	06030002-07-02	4.68	2.14
Lower Limestone Creek	06030002-07-03	9.67	4.42
Lower Piney Creek	06030002-08-03	3.71	1.70
Aldridge Creek	06030002-09-03	21.71	9.93
Bartee Branch-Tennessee River	06030002-09-04	8.90	4.07
Oakland Spring Branch-Beaverdam Creek	06030002-09-05	21.59	9.88
Matney Branch-Tennessee River	06030002-09-06	7.09	3.24
Swan Creek	06030002-11-01	0.13	0.06

A map showing the subwatersheds in relation to the Huntsville MS4 boundary is included as **Figure 2** in the SWMPP.

1.6 Water Quality Concerns

Section 303(d) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987, and the USEPA Water Quality Planning and Management Regulations (40 CFR 130) require states to identify waterbodies not in compliance with the water quality standards applicable to their designated use classifications. Section 303(d) then requires that total maximum daily loads (TMDLs) be determined for all pollutants causing violation of applicable water quality standards in each identified segment.

1.6.1 Impaired Waterbodies with the City Limits

The Huntsville city limits currently encompass the following impaired waterbodies.

Table 1-4 Impaired within the City Limits Waterbodies

Waterbody	Impaired Segment	Type	Causes
Flint River	AL06030002-0403-112	TMDL	Fecal coliform
		303(d)	Turbidity from agriculture, land development
Chase Creek	AL06030002-0403-302	TMDL	CBOD, NBOD, Siltation
		303(d)	Pathogens (E. Coli) from pasture grazing
Goose Creek	AL06030002-0404-200	TMDL	CBOD, NBOD, E. Coli
Indian Creek	AL06030002-0501-110	TMDL	CBOD, NBOD, Siltation
		303(d)	Pathogens (E. Coli) from collection system failure, pasture grazing, urban runoff/storm sewers
Huntsville Spring Branch	AL06030002-0503-102	303(d)	Metals (Arsenic) from urban runoff/storm sewers
Indian Creek	AL06030002-0505-102	303(d)	Pathogens (E. Coli) from collection system failure, pasture grazing, urban runoff/storm sewers
Limestone Creek	AL06030002-0703-102	TMDL	CBOD, NBOD, Siltation
Aldridge Creek	AL06030002-0903-100	TMDL	CBOD, NBOD, Siltation

A map showing the impaired waterbodies in relation to the Huntsville city limits is included as **Figure 3** in Appendix A of the SWMPP.

1.6.2 Impaired Watersheds Intersecting the City Limits

In addition to the impaired waterbodies, the Huntsville city limits encompass portions of watersheds for the following impaired waterbodies.

Table 1-5 Portions of Impaired Watershed within the City Limits

Watershed	Impaired Segment	Type	Causes
Beaverdam Creek	AL06030002-0305-100	303(d)	Siltation from crop production, land development
Brier Fork	AL06030002-0306-110	303(d)	Siltation from crop production, land development
Indian Creek	AL06030002-0505-111	303(d)	Nutrients from agriculture
Tennessee River	AL06030002-0904-100	303(d)	Nutrients from agriculture
Tennessee River	AL06030002-0906-102	303(d)	Nutrients from agriculture
Limestone Creek	AL06030002-0906-600	303(d)	Metals (Mercury) from atmospheric deposition
Swan Creek	AL06030002-1101-101	TMDL	CBOD, NBOD, Siltation
		303(d)	Nutrients from agriculture, municipal, urban runoff/storm sewers
Swan Creek	AL06030002-1101-102	TMDL	CBOD, NBOD, Siltation
Tennessee River	AL06030002-1102-102	303(d)	Nutrients from agriculture
Tennessee Rive	AL06030002-1102-103	303(d)	Nutrients from agriculture

1.6.3 Construction Priority Sites

Additionally, construction sites within the Limestone Creek, Indian Creek, Beaverdam Creek, Brier Fork, Flint River, Chase Creek, Aldridge Creek, and Swan Creek watersheds are considered Priority Construction Sites, as defined in Part V of the 2016 Alabama Construction General Permit. A map showing the portions of the City located within the construction Priority watersheds is included as **Figure 4** in Appendix A of the SWMP.

1.7 Illicit Discharge Detection and Elimination Program Requirements

Part II.B.3.a of the Phase I permit requires that the Permittee develop and implement an Illicit Discharge Detection and Elimination (IDDE) Program that includes the following:

- The development and annual update of a MS4 map showing, at a minimum, the coordinates of known major outfalls and names of all waters of the State to which the outfalls discharge.
- An ordinance or other regulatory mechanism that effectively prohibits non-storm water discharges to the MS4.
- Posting of the ordinance or other regulatory mechanism to the City's website.
- A dry weather screening program designed to address non-storm water discharges.
- Procedures for tracing the source of a suspect illicit discharge.
- Procedures for eliminating an illicit discharge.
- Procedures to notify ADEM of an illicit discharge entering the Permittee's MS4 from an adjacent MS4.
- A mechanism for the public to report illicit discharges and procedures for investigation of the reports.
- A training program for appropriate personnel on identification, reporting, and corrective action of illicit discharges.

2.0 Non-Storm Water Discharges

2.1 Rationale Statement

Section 402(p)(3)(B)(ii) of the Clean Water Act of 1987 requires that permits for municipal separate storm sewers include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Part I.B.2 of the Phase I permit authorizes specific non-storm water discharges, provided they do not cause or contribute to a violation of water quality standards and they have been determined not to be substantial contributors of pollutants.

2.2 Authorized Non-Storm Water Discharges

Part I.B.2 of the Phase I permit authorizes the following non-storm water discharges:

a. Water line flushing

b. Landscape irrigation (not consisting of treated or untreated wastewater unless authorized by ADEM)

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 ADEM)

j. Rising ground water

k. Springs

l. Water from crawl space pumps

m. Lawn watering runoff

n. Individual residential car washing, to include charitable car washes

o. Residual street wash water

p. Discharge or flows from firefighting activities (including fire hydrant flushing)

q. Flows from riparian habitats and wetlands

r. De-chlorinated swimming pool discharges

2.3 Illicit Discharges

An illicit discharge is defined in Part V.X of the Phase I permit as "*any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges pursuant to a NPDES permit*." An illicit connection is defined as "*any man-made conveyance connecting a non-storm water discharge directly to a municipal separate storm sewer system*."

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998. The ordinance specifically identifies an illicit discharge as "*any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer system) and discharges from firefighting and emergency management activities*." Section 21-336 of the ordinance specifically prohibits illicit discharges into the Huntsville storm sewer system, with the exception of those non-storm discharges explicitly exempted in the ordinance.

The ordinance currently does not specifically prohibit illicit connections. The City intends to revise the ordinance, as discussed in Section 6.2.1 of the SWMPP.

3.0 IDDE Priority Areas

3.1 Rationale Statement

IDDE priority areas are those areas deemed sensitive and selected for more frequent screening.

3.2 IDDE Priority Areas

The City has defined the portion of McDonald Creek from the City limit/arsenal boundary north to Patton Road as **IDDE Priority Area 1**. The area encompasses an approximate stream length of 0.82 miles and eight identified major outfalls. The stream flows through a residential area constructed in the 1960s, and was previously identified as a location with a higher frequency of sanitary sewer overflows, litter, and transient illicit discharges.

A map showing the designated IDDE Priority Area is included as **Figure 7** in Appendix A of the SWMPP.

3.2.1 Additional IDDE Priority Areas

Implementation of the SWMPP includes the regular inspection of major outfalls, tracking of public IDDE and litter complaints, and wet weather monitoring. As the program matures and data is collected, the City will consider designating additional IDDE Priority Areas. Should additional IDDE Priority Areas be identified, the City will include a description and/or map of the designated areas in the Annual Report.

4.0 MS4 Map

4.1 Rationale Statement

Part II.B.3.a(1) of the Phase I permit requires the City of Huntsville to develop and annually update a map of the MS4. Accurate and up-to-date maps of the storm sewer system are critical to the implementation of the IDDE program. Maps are used to direct field crews, locate outfalls, assess illicit discharge potential, track reports, and track corrective actions.

4.2 Outfall Identification

The City will implement a program designed to evaluate known outfalls and identify previously unknown outfalls to the MS4. City personnel or subcontracted crews will use construction plan review, GIS queries, and/or to identify points where storm water discharged within the City limits enters the stream.

Field observation to identify outfalls includes collection of the following data:

a. Outfall coordinates

b. Conveyance type (ditch, culvert, pipe, etc.)

c. Conveyance shape

d. Conveyance size (pipe diameter, ditch width and depth, box culvert dimensions, etc.)

e. Conveyance material (RCP, PVC, CMP, etc.)

f. Outfall condition

g. Outfall elevation

h. Surrounding land use

i. Pictures of the outfall, with outfall identification shown in the picture

The outfall identification data will be recorded on the **Outfall Reconnaissance Inventory Field Sheet** (located in Appendix E of the SWMPP) or on an equivalent form. Outfall identification may be conducted in conjunction with dry-weather monitoring activities discussed in Section 6.0 of this plan.

The initial outfall inventory within the Huntsville MS4 was conducted in 2001 through 2004. Following completion of the initial outfall inventory, new outfalls were added to the GIS map and database as identified. A map showing identified major outfalls is included as **Figure 6** in Appendix A of the SWMPP. The City will continue to update the MS4 Map as additional outfalls are identified.

4.3 Verification of Outfalls Identified During Plan Review

During the review of construction plans, the Engineering Department will identify the locations where a proposed development plans to discharge to a waterbody within the MS4. Proposed outfalls are identified on the preliminary plat. Following construction, as-built drawings are required to be submitted to the Engineering Department.

Information provided on the as-built drawings will be verified through field observation during the final inspection by the GIS Department. Outfalls verified in the field will be added to the GIS database within approximately 30 days of being verified.

Field observation to verify outfalls includes collection and/or confirmation of the following information:

a. Outfall coordinates

b. Conveyance type (ditch, culvert, pipe, etc.)

c. Conveyance shape

d. Conveyance size (pipe diameter, ditch width and depth, box culvert dimensions, etc.)

e. Conveyance material (RCP, PVC, CMP, etc.)

f. Outfall condition

g. Outfall elevation

h. Pictures of the outfall, with outfall identification shown in the picture

The outfall verification data may be recorded on the Outfall Reconnaissance Inventory Field Sheet (located in Appendix E of the SWMPP) or on a separate form. Outfall verification may also be conducted in conjunction with dry-weather monitoring activities discussed in Section 6.0 of this plan.

5.0 Illicit Discharge Ordinance

5.1 Rationale Statement

Part II.B.3.a(2) of the Phase I permit requires the City of Huntsville to effectively prohibit, through ordinance or other regulatory mechanism, non-storm water discharges into the municipal separate storm sewer system. The purpose of the illicit discharge ordinance is to provide legal authority to the City to prohibit illicit discharges, prohibit illicit connections, investigate suspected illicit discharges, require elimination of illicit discharges, and carry out enforcement actions.

5.2 Provide Legal Authority

City of Huntsville Ordinance Number 98-3 was adopted on February 12, 1998 under Chapter 21 of the Code of Ordinances, City of Huntsville, Alabama *Article III. Storm Sewers*. Article III, Division 2 establishes regulations for NPDES compliance within the City. A copy of the ordinance is located in Appendix C of the SWMPP.

5.3 Prohibit Illicit Discharges and Illicit Connections

Section 21-336 of the ordinance specifically prohibits illicit discharges into the Huntsville storm sewer system, with the exception of those non-storm discharges explicitly exempted in the ordinance.

The ordinance specifically identifies an illicit discharge as "*any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer system) and discharges from firefighting and emergency management activities*." The ordinance does not specifically prohibit illicit connections.

The NPDES Compliance ordinance will be reviewed on an annual basis and updated as needed. The ordinance will be evaluated on its effectiveness in addressing identified illicit discharges and preventing repeat offenders.

5.4 Enforcement

Section 21-338(a) authorizes the manager of the division of natural resources and environmental management of the city or his designated representative to enter and inspect any private property or premises to determine the existence and source of contamination.

Section 21-342 of the ordinance authorizes the Natural Resources Director or any person under his supervision to issue citations.

The ordinance specifically prohibits the City from taking any enforcement action for a violation of the ordinance if ADEM has already commenced enforcement actions for the same violation, including the issuance of a Notice of Violation or an administrative order.

5.5 Evaluation

The NPDES Compliance ordinance will be reviewed on an annual basis and updated as needed. The ordinance will be evaluated on its effectiveness in addressing identified illicit discharges.

6.0 Dry Weather Screening Program

6.1 Rationale Statement

Part II.B.3.a(3) of the Phase I permit requires the City of Huntsville to develop and implement a dry weather screening program designed to detect and address non-storm water discharges to the MS4. Visual inspection of outfalls can identify problem areas without the need for in-depth laboratory analysis. Indicators of potential illicit discharges include outfalls that are flowing during dry weather, indicating a potential illicit connection, or outfalls that have high turbidity, strong odors, or unusual colors.

The City of Huntsville will conduct field assessment activities for the purpose of verifying outfall locations, identifying previously unknown outfalls, and locating, identifying, and correcting illicit discharges to the MS4.

6.2 Prioritization Schedule

The City or trained subcontractors will conduct visual inspections of all identified outfalls within the City at least once during each five-year permit cycle.

Outfalls in designated IDDE Priority Areas will be visually inspected once every three years.

6.3 Responsibility

ORI inspections are the responsibility of the GIS Department. Inspections may be performed by City staff or by subcontracted crews. All field reports will be reviewed by the Natural Resources Department.

6.4 Inspection Conditions

ORI inspections should be conducted when the outfall is accessible, unobstructed, and when there will be no storm water flows.

The preferred conditions for outfall inspections include:

- Dry season (e.g., summer or early fall)
- No rainfall over 0.1 inch in the previous 72 hours
- Recently mowed, low vegetation, or leaf-off conditions

Field crews should allow three to four days of an antecedent dry period before starting or resuming inspections after long periods of heavy rain.

6.5 Equipment

Prior to conducting field work, crews should assemble all required equipment and review records from prior inspections in the same area to become familiar with the outfall locations and any potential inspection challenges. Field crews should prepare for consecutive days of field work when possible. Required equipment may include:

1. Minimum 2 person crew
2. Safety gear (e.g., vest, hard hat, cones)
3. City identification or authorization
4. Field notebook and pencils
5. Outfall Reconnaissance Inventory Field Sheets
6. Map or aerial photo of inspection area
7. GPS unit with charged battery
8. Cell phone with charged battery
9. Digital camera with charged battery
10. Compass
11. Machete or clippers
12. Flash light or headlamp with charged battery
13. Tape measure

14. Dry erase board and marker (to identify outfall in photos)
15. First aid kit
16. Stopwatch or watch with second hand
17. Clear 1-liter sample bottle to evaluate field parameters
18. Sampling kits (see Section 6.10)
19. Cooler with ice
20. Permanent marker
21. Thermometer
22. pH probe
23. Ammonia test strips
24. Nitrile or latex gloves
25. Wide-mouth container
26. Hand sanitizer

6.6 Safety Considerations

Health and safety considerations for outfall inspection and sampling include, but are not limited to, the potential for contact with:

- Contaminated water
- Sharp debris and objects
- Wild animals
- Landowners
- Confined spaces

Field crews should be comprised of at least two individuals, each equipped with proper footwear (e.g., sturdy waterproof boots or waders) and gloves (e.g., neoprene, latex, or rubber).

Private properties should not be accessed unless proper notification has been provided, preferably in advance. Field crews should carry identification or wear clothing that identifies them as municipal workers or subcontractors.

It is recommended that field crews be vaccinated against Hepatitis B, particularly if the crews will be accessing waters known to be contaminated with illicit sewage discharges.

A confined space refers to a space that has limited openings for entry and exit, unfavorable natural ventilation that could contain or produce hazardous atmospheres, and is not intended for continuous employee occupancy. Examples of confined spaces field crews might encounter are manholes or tunnels. In the event a confined space is encountered during an IDDE investigation, the space will be investigated using cameras. **Under no circumstances should inspection personnel enter a confined space.**

If confined space entry is necessary to complete an IDDE investigation, the Engineering Department may coordinate with other City departments to locate City personnel with the appropriate confined space entry training and equipment. Under no circumstances should any person enter a confined space until all required safeguards have been accomplished, entry permits have been completed, and authorization is granted.

6.7 Inspection Procedure

The ORI inspection procedure includes the following activities:

1. Visually inspect the outfall and the immediate surrounding area through the use of drones or in-person evaluation

2. Photograph the current conditions (using the whiteboard or other method to identify the outfall in the photos)

3. Complete the Outfall Reconnaissance Inventory Field Sheet

If flow is observed continue with steps 4 and 5.

4. Measure observed flow by timing how long it takes to fill a wide-mouth container of known volume

5. Perform field screening of observed flow

Potential illicit discharges are indicated by outfalls that have flow in dry weather and/or foul odors or discolored water in or around the outfall pipe. During field inspections, crews should also note whether outfalls have maintenance issues, such as damaged infrastructure or trash accumulation.

When a potential illicit discharge is identified, field crews will photograph the discharge and outfall, then conduct a brief visual inspection of the surrounding area to identify possible sources of the discharge.

6.8 Visual Inspection

Visual observations are used to observe conditions at the outfall and complete the **Outfall Reconnaissance Inventory Field Sheet** (see Appendix E of the SWMPP). Sections 1, 2, and 5 of the Field Sheet require information on outfall location, surroundings, condition, and type. Sections 3 and 4 of the Field Sheet are used to record the following dry-weather flow observations:

- Flow rate
- Color of discharge
- Odor
- Turbidity
- Floatables

6.9 Field Screening

Where dry weather flows are noted, but no obvious illicit discharge is identified, field crews will screen the discharge for indicators of illicit discharges. Field screening will include testing for temperature, pH, and ammonia.

Table 6-1 Field Screening Values

Parameter	Unlikely	Suspect
Temperature	< 85 °F	> 85 °F
pH	5.5 to 9.0	< 5.5 or > 9.0
Ammonia	< 1 mg/L	> 1 mg/L

Sanitary wastewater and certain industrial discharges can substantially increase outfall discharge temperatures. Elevated discharge temperatures may indicate a sanitary or industrial illicit discharge. Discharge temperatures over 90 °F indicate an obvious illicit discharge, likely due to an industrial source such as cooling water or boiler blowdown.

Extreme pH levels can indicate the presence of an industrial illicit discharge.

Ammonia concentrations in groundwater or tap water are typically low. High ammonia concentrations in dry-weather flows may indicate the discharge of sanitary wastewater or liquid wastes from some industrial sites.

6.10 Discharge Sampling

If a discharge has a severity index of 3 on one or more indicators in Section 4 of the ORI Field Sheet, or if field screening results indicate a suspect discharge, field crews will collect samples to be analyzed for the following parameters:

Table 6-2 Illicit Discharge Indicators

Parameter	Indicator
Surfactants	> 0.25 mg/L indicates discharge is possibly contaminated by sewage or washwater

Parameter	Indicator
Fluoride	> 0.13 and < 0.6 mg/L indicate possible tap water source > 0.6 mg/L indicates possible industrial source
Ammonia (NH_3)	A/P ratio > 1 indicates sewage; A/P ratio < 1 indicates washwater ≥50 mg/L indicates possible industrial discharge
Potassium	A/P ratio > 1 indicates possible sewage A/P ratio < 1 indicates possible washwater ≥20 mg/L indicates possible industrial discharge
Total Phosphorous	> 0.4 mg/L indicates possible contamination from lawn practices, agriculture, sewage, or washwater

The table below provides the preferred laboratory method, sampling container, required preservative, and analysis hold time for each parameter. The City will use this as a guideline for sampling protocols.

Table 6-3 Laboratory Analysis

Parameter	EPA Method	Container	Preservative	Hold Time
MBAS (Surfactants)	5540 C-2011	HDPE – 1 L	None	48 hours
Ammonia Nitrogen	350.1	HDPE – 500 mL	$Na_2S_2O_3 + H_2SO_4$	28 days
Fluoride	300.0	HDPE – 125 mL	None	28 days
Total Phosphorous	365.2	HDPE – 250 mL	H_2SO_4	28 days
Potassium	200.7	HDPE – 500 mL	HNO_3	180 days

Following receipt of the analytical results, the type or source of the illicit discharge may be characterized based on the indicators listed in Table 6-2. The listed indicators are intended as a guideline to assist in the identification of an illicit discharge source, and should not be used as the sole method of investigating a suspect discharge.

The following flow charts outline the screening and sampling procedure, and the discharge identification procedures.

Figure 6-1 Evaluating When to Collect a Sample

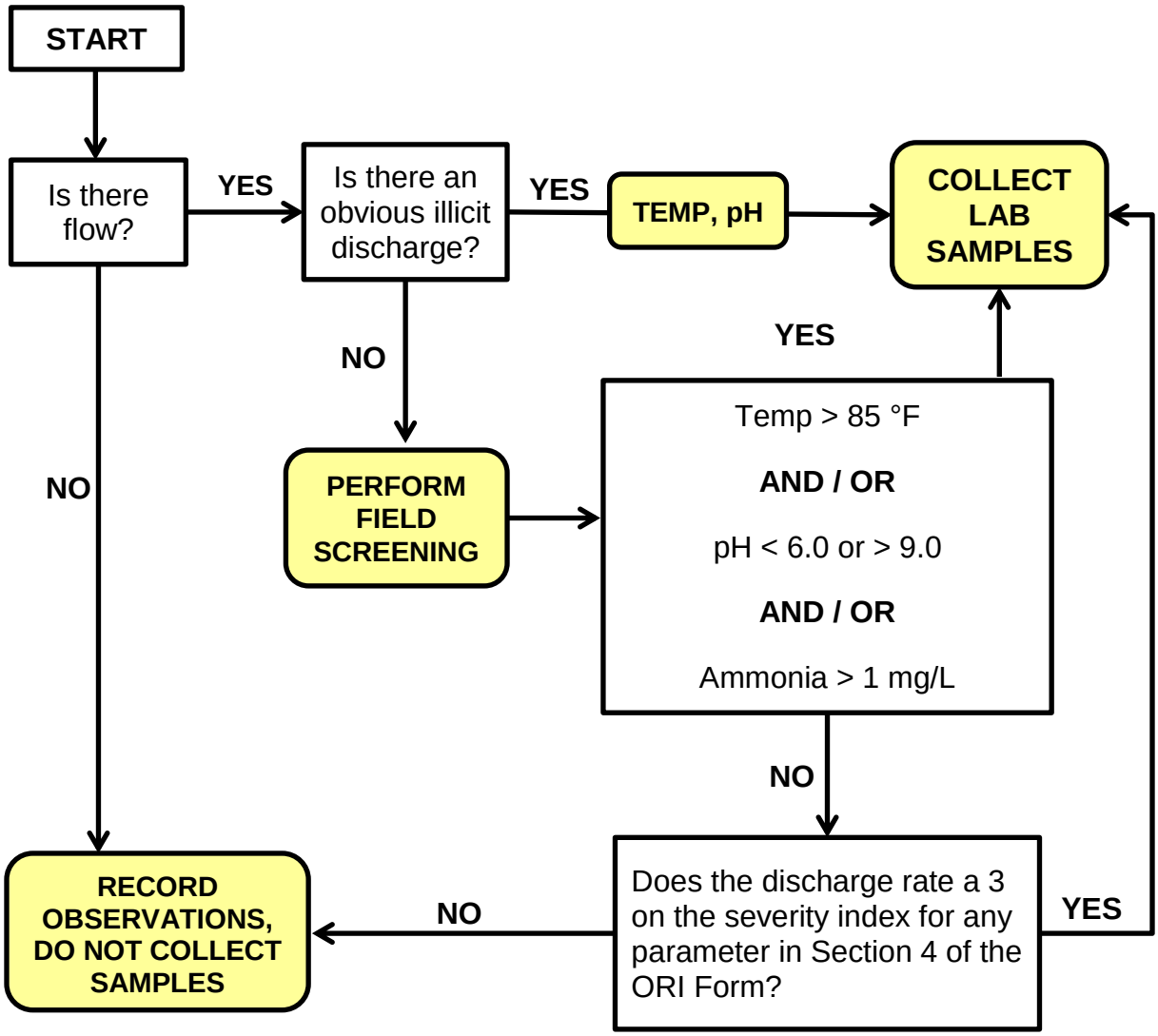
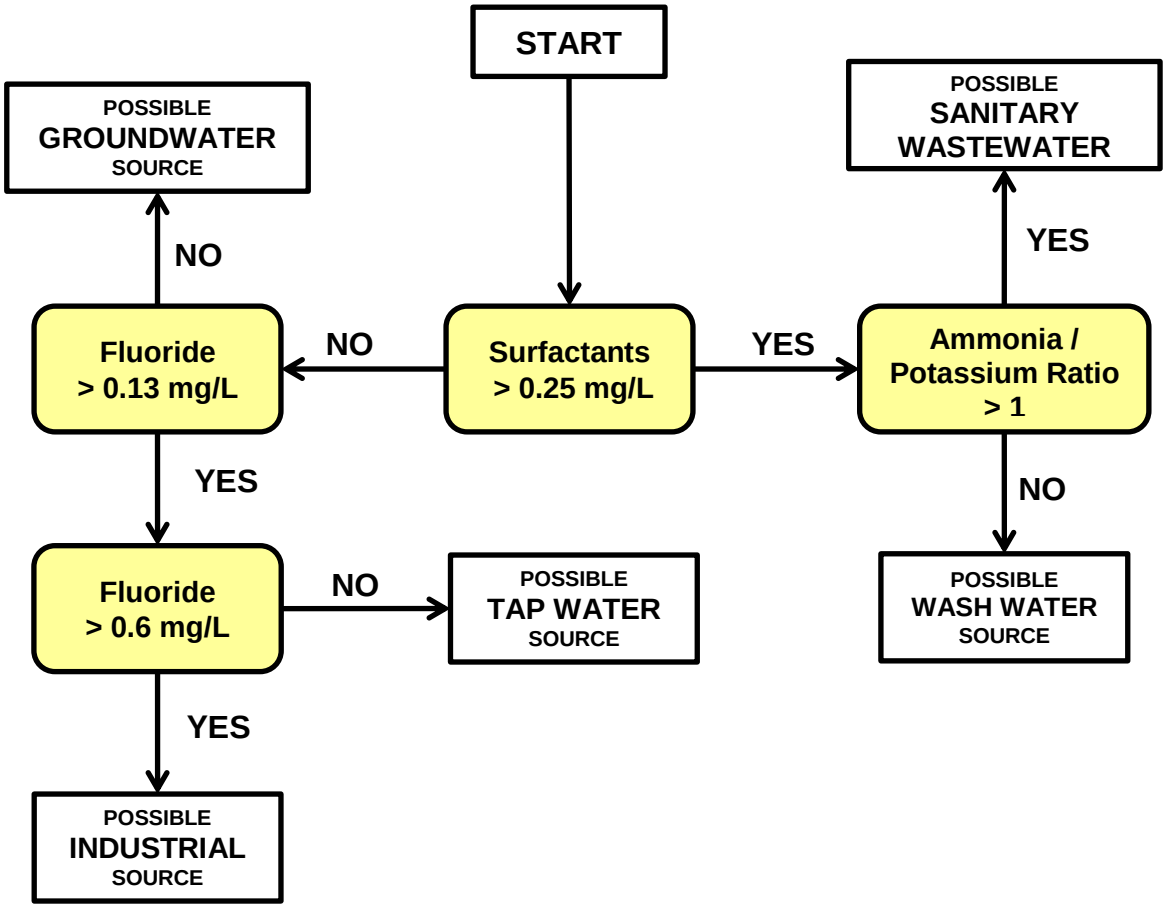


Figure 6-2 Evaluating Analytical Data to Determine Discharge Type



6.11 Inspection Reporting

If the inspection crew encounters a transitory discharge, such as a liquid or oil spill, during inspection activities, the observed spill or environmental hazard will be immediately reported to the Natural Resources Department. Obvious illicit discharges will also be reported upon observation.

Completed ORI Field Sheets, photos, and additional information collected during the ORI inspection will be submitted to the Natural Resources Department within five (5) business days of completion of the inspection.

6.12 Outfall Designation

Data from each ORI Field Sheet will be analyzed to designate the observed outfall as having obvious, suspect, possible, or unlikely discharge potential.

Discharges with an "obvious" ranking will be investigated within five (5) days of observation, assuming the source was not identified at the time the discharge was observed. Discharges with a "suspect" ranking will

be investigated within fourteen (14) days of observation. Discharges that have a "potential" ranking will be investigated within thirty (30) days of observation. Discharges with an "unlikely" ranking will be noted for comparison during future inspections. Investigations will generally follow the procedures outlined in Section 7.0 of this IDDE Program.

Table 6-4 Outfall Ranking

Response Time	Ranking	Characteristics
5 days	Obvious	Outfalls where there is an illicit discharge that doesn't require sample collection for confirmation
14 days	Suspect	Flowing outfalls with high severity (ranking of 3) on one or more physical indicators
30 days	Potential	Flowing or non-flowing outfalls with presence of two or more physical indicators
-	Unlikely	Non-flowing outfalls with no physical indicators of an illicit discharge

7.0 Illicit Discharge Investigation

7.1 Rationale Statement

Part II.B.3.a(4) of the Phase I permit requires the City of Huntsville to develop and implement procedures for tracing the source of a suspect illicit discharge. The following procedures are intended to assist the City with the investigation of various types of illicit discharges that could occur in the MS4 area.

7.2 Corrective Action Record Keeping

When a suspect illicit discharge or illicit connection is identified, the Natural Resources Department will open a case log detailing:

- Type of suspected discharge
- Location of suspected discharge
- Copy of the ORI or citizen report
- IDDE investigation activities and dates
- IDDE investigation results
- Responsible party information
- All communications with the responsible party
- Proof of corrective actions

Throughout the problem investigation and corrective action activities, all information related to the incident or property in question should be documented in the case log.

7.3 Initiating an Investigation

Once an illicit discharge is suspected or detected at an outfall or in a stream, one of four types of illicit discharge investigations is triggered to track down the source:

- Storm drain network investigations
- Drainage area investigations
- On-site investigations
- Septic system investigations

When an illegal dumping or illicit discharge problem is directly observed by City personnel or a City subcontractor, it is generally not necessary to follow these investigation procedures, as the source of the problem discharge is already known.

7.4 Storm Drain Network Investigations

Storm sewer investigations use field crews to trace the source of a discharge problem to a single segment of a storm sewer. The investigation starts at the outfall and works progressively up the trunk from the outfall. Common investigative methods include:

- Visual inspection at manholes
- Sandbagging or damming the trunk
- Dye testing
- Smoke testing
- Video testing

7.5 Drainage Area Investigations

Drainage area investigations are initially conducted in the office, and involve a parcel by parcel analysis of potential generating sites within the drainage area of the suspect outfall. Drainage area investigations are appropriate when the flow type in the discharge appears to be specific to a certain type of land use or generating site.

These investigations may include the following techniques:

- Analysis of land use
- Obtaining permit information from the ADEM
- Review of as-built drawings
- Aerial photography analysis
- Infrared aerial photography analysis

7.6 On-site Investigations

On-site investigations are typically performed by dye testing the plumbing systems of households and buildings. Where septic systems are prevalent, inspections of tanks and drain fields may be needed.

7.7 Septic System Investigations

If a septic system is suspected as the source of an illicit discharge, the City will notify the Madison or Limestone County Health Department, as appropriate. The Natural Resources Department will be responsible for coordinating with the Limestone or Madison County Health Department to confirm that the required corrective actions have been completed.

8.0 Illicit Discharge Elimination

8.1 Rationale Statement

Part II.B.3.a(5) of the Phase I permit requires the City of Huntsville to develop and implement procedures for eliminating identified illicit discharges.

Following the identification of an illicit discharge or connection, the City will first attempt to secure voluntary compliance through education. If corrective actions are not taken, the City will respond to identified illicit discharges, illicit connections, or illegal dumping activities with a Notice of Violation and/or citation.

8.2 Voluntary Compliance

When an illicit discharge or illicit connection is identified, the City will first pursue voluntary compliance through responsible party education. Business operators and property owners may not be aware of illicit connections or illegal discharge activities on their property, or the illicit discharge/connection may have been legal at one time. In these cases, the non-compliance may be adequately addressed by providing information about the connection or operation, the environmental consequences of the illicit discharge, and suggestions on how to remedy the problem.

Property owners and/or operators will be notified that the identified illicit discharge or illicit connection must be corrected in a timely manner and that the City will conduct a follow-up site visit to verify compliance.

8.3 Enforcement Actions

When voluntary compliance does not produce the desired result, the City will pursue follow-up enforcement action.

For continuing illicit discharges for which voluntary compliance has not been achieved, the City will issue a Notice of Violation (NOV). The NOV will contain a description of the necessary remedial measures as well as a deadline for completing them. The NOV will also specify the potential consequences of failing to meet the prescribed deadline.

If the terms of the NOV are not met by the discharger, the ordinance provides authority for the Natural Resources Director or any person under his supervision to issue citations. On case by case basis, inspectors may use discretion for the direct issuance of a citation.

The ordinance specifically prohibits the City from taking any enforcement action for a violation of the ordinance if ADEM has already commenced enforcement actions for the same violation, including the issuance of a Notice of Violation or an administrative order.

All enforcement actions undertaken by the City of Huntsville will be the responsibility of the Natural Resourced Department.

9.0 Notification of ADEM

9.1 Identified Illicit Discharges within the MS4

As previously discussed, the IDDE ordinance adopted on February 12, 1998 provides the City with the legal authority to address illicit discharges. The City intends to report identified illicit discharges or connections to ADEM only if the enforcement measures available to the City are not effective at compelling compliance.

9.2 Discharges from an Adjacent MS4

Part II.B.3.a.(6) of the Phase I permit requires the City of Huntsville to develop procedures to notify ADEM of a suspect illicit discharge entering the Permittee's MS4 from an adjacent MS4.

The Huntsville MS4 is bordered in several areas by the Madison MS4, the Madison County MS4, the University of Alabama in Huntsville MS4, the Alabama A&M University MS4, and the Redstone Arsenal MS4. Should the City identify a suspect illicit discharge originating within a neighboring MS4, the City will notify the appropriate MS4 and the ADEM Water Division within 48 hours of observation of the suspect illicit discharge.

The notification to the responsible MS4 and ADEM will include the following information:

1. Location of the suspect illicit discharge, including latitude and longitude, if known
2. Type of illicit discharge, if known
3. Estimated quantity or flow rate, if known
4. Origin or suspected origin of the suspect illicit discharge, if known
5. Date and time the suspect illicit discharge was observed
6. Description of affected media, including the name of the receiving waterbody, if known
7. Corrective actions being taken within the Huntsville MS4, if any

10.0 Public Reporting

10.1 Rationale Statement

Part II.B.3.a.(7) of the Phase I permit requires the City of Huntsville to develop and implement a mechanism for the public to report illicit discharges within the MS4. The City must also develop procedures to investigate reports from the public.

10.2 SeeClickFix System

The City currently maintains a web-based reporting system for individuals to report concerns or problems. The "HSV Connect" feature on the webpage is part of the SeeClickFix program. SeeClickFix collects data entered by the individual making the report, including the location and type of issue and comments on the issue, and allows for the upload of photos or other documents.

Illicit discharge reports from the SeeClickFix system will be investigated within five (5) business days of receipt.

10.3 Investigation of Public Complaints

Illicit discharge reports received via the SeeClickFix system, email, or some other method will be directed to the appropriate City department. The department will be responsible for initiating investigative or corrective actions in accordance with Sections 7.0 and 8.0 of this program.

11.0 Personnel Training

11.1 Rationale Statement

Part II.B.3.a(8) of the Phase I permit requires the City of Huntsville to develop and implement a training program for appropriate municipal personnel on identification, reporting, and correction of illicit discharges.

11.2 Annual Awareness Training

Appropriate City personnel will undergo annual training on illicit discharge identification, reporting, and corrective actions. City departments storing, using, or disposing of potential pollutants are responsible for selecting all appropriate personnel to attend annual awareness training.

Water Pollution Control is responsible for ensuring appropriate personnel are properly trained on corrective actions regarding Sanitary Sewer Overflows (SSOs). The Fire Department is responsible for ensuring appropriate personnel are properly trained on corrective actions regarding hazardous spill response. Landscape Management is responsible for ensuring appropriate personnel are properly trained on corrective actions regarding pesticides, herbicides, and fertilizers.

Appendix E Forms

STORM WATER BASIN INSPECTION FORM

FACILITY NAME:	FACILITY I.D.:
FACILITY LOCATION:	SURROUNDING LAND USE:
BASIN TYPE:	OUTLET TYPE:

INSPECTION TYPE: ☐ ANNUAL ☐ FOLLOW-UP ☐ OTHER: _____

BASIN CONDITION				COMMENTS
Flotables?	☐ YES	☐ NO		
Litter?	☐ YES	☐ NO		
Debris?	☐ YES	☐ NO		
Weeds?	☐ YES	☐ NO		
Trees or large vegetation?	☐ YES	☐ NO		
Algae growth?	☐ YES	☐ NO		
Sediment accumulation?	☐ YES	☐ NO		
Bank erosion?	☐ YES	☐ NO		
Exposed soils?	☐ YES	☐ NO		
Holes?	☐ YES	☐ NO		
Ponding?	☐ YES	☐ NO	☐ N/A	

OUTLET AND/OR SPILLWAY CONDITION				COMMENTS
Erosion at outlet?	☐ YES	☐ NO	☐ N/A	
Outlet protection damaged?	☐ YES	☐ NO	☐ N/A	
Erosion at emergency spillway?	☐ YES	☐ NO	☐ N/A	
Outlet or riser damaged?	☐ YES	☐ NO	☐ N/A	
Outlet or riser obstructed?	☐ YES	☐ NO	☐ N/A	

INSPECTION RESULTS (CHOOSE ONE)

☐ Visual inspection found no apparent problems with the structure

☐ Maintenance and/or corrective actions are required

ADDITIONAL COMMENTS:

INSPECTION DATE:	INSPECTION START TIME:	INSPECTION END TIME:

INSPECTOR NAME:	INSPECTOR SIGNATURE:

BMP INSPECTION FORM

PROJECT NAME:	NPDES PERMIT NO.: **ALR10**
SITE LOCATION:	PRIORITY: ☐ YES ☐ NO

OWNER/OPERATOR:	OWNER/OPERATOR CONTACT:	PHONE NUMBER:

TYPE OF INSPECTION: ☐ ROUTINE ☐ FOLLOW-UP TO VERBAL WARNING ☐ FOLLOW-UP TO NOV

RECORDS REVIEW CHECKLIST			
Narrative CBMP Plan available on-site?	☐ YES	☐ NO	☐ N/A
Erosion and Sediment Control Plans available on-site?	☐ YES	☐ NO	☐ N/A
SPCC Plan available on-site?	☐ YES	☐ NO	☐ N/A
Rainfall records maintained?	☐ YES	☐ NO	☐ N/A
OPERATIONS & MAINTENANCE CHECKLIST			
Were BMPs properly implemented and maintained?	☐ YES	☐ NO	☐ N/A
Are additional BMPs needed?	☐ YES	☐ NO	☐ N/A
Was the facility ID properly displayed?	☐ YES	☐ NO	☐ N/A
Were general housekeeping, solid wastes, fuel, and/or other chemicals properly maintained at the time of inspection?	☐ YES	☐ NO	☐ N/A
Was concrete washout properly managed at the time of the inspection?	☐ YES	☐ NO	☐ N/A
Were portable toilets properly maintained at the time of the inspection?	☐ YES	☐ NO	☐ N/A
Were the facility exits constructed and maintained to prevent off-site vehicle tracking?	☐ YES	☐ NO	☐ N/A
Was on-site sediment accumulation and/or on-site erosion observed at the time of inspection?	☐ YES	☐ NO	☐ N/A
Was off-site sediment accumulation and/or off-site erosion observed at the time of inspection?	☐ YES	☐ NO	☐ N/A
RECEIVING WATER CHECKLIST			
Was discharge occurring at the time of inspection?	☐ YES	☐ NO	☐ N/A
Were receiving waters evaluated at the time of inspection?	☐ YES	☐ NO	☐ N/A
Was sediment accumulation observed in the MS4 as a result of site activities?	☐ YES	☐ NO	☐ N/A
Was there a substantial visual turbidity contrast observed in the receiving water(s) as a result of facility discharge(s)?	☐ YES	☐ NO	☐ N/A

ADDITIONAL COMMENTS:

INSPECTION DATE:	INSPECTION START TIME:	INSPECTION END TIME:

INSPECTOR NAME:	INSPECTOR SIGNATURE:

Application for Best Management Practices (BMP) Plan Approval
City of Huntsville
Division of Natural Resources & Environmental Management

This application is made pursuant to the requirements of § 21-351 of the Code of Ordinances of the City of Huntsville, and outlines the structural and non-structural Best Management Practices ("BMPs") being implemented or to be implemented by the applicant to prevent the discharge of pollutants to the City of Huntsville Municipal Separate Storm Sewer System (MS4).

A. GENERAL FACILITY INFORMATION

1. **Name of Business:** _____

   Location: _____

   _____

   Telephone Number: _____

   Mailing Address (if different than the physical location): _____

   _____

   _____

2. **Nature of Business** (Describe the principal business activities conducted at this location): _____

   _____

   _____

   _____

   SIC Code: _____

3. **Name and Address of Owner:** _____

   _____

   _____

   Telephone Number: _____

4. **Name and Address of Responsible Official:** _____

_____

_____

_____

(Phone) (Title)

5. **Name of Facility Contact:** _____

_____

(Phone) (Title)

B. STORAGE AND USE OF SIGNIFICANT MATERIALS

1. **List all significant materials used in the business, generated in conducting the business or stored at the business location. Indicate the maximum volume stored on-site.** [Note: "Significant materials" includes raw materials, fuels, oils, solvents, detergents, finished materials such as metallic products, hazardous substances designated under § 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), any chemical the facility is required to report pursuant to § 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA), any waste product regulated as a hazardous waste under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, and other waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges].

ATTACH ADDITIONAL SHEETS IF NECESSARY

_____

_____

_____

_____

_____

_____

_____

_____

2. **Facility Diagram. Show the location within, or outside the facility where each material identified in Item 1 above is stored. This may be done on a facility diagram provided below or on an attachment. For each storage area, indicate whether the materials are stored in drums, carboys, totes or bulk storage tanks. Include all tank capacities.**

3. **For each storage area, identify structural Best Management Practices (BMPs) employed to prevent the release of pollutants to the Municipal Separate Storm Sewer System.** [Note: Examples of structural BMPs include containment curbing, sloped floors, containment trenches, blind sumps, double-walled tanks with interstitial leak detection, etc.]

_____

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4. **For each storage area, identify non-structural Best Management Practices (BMPs) employed to prevent the release of pollutants to the Municipal Separate Storm Sewer System.** [Note: Examples of non-structural BMPs include operating procedures for materials loading and unloading, waste handling procedures, etc.]

_____

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_____

_____

4. **List contact information for outside agencies to be notified in the event of a spill that results, or could result, in a release of pollutants to the Municipal Separate Storm Sewer System.** [Note: examples include the National Response Center for reportable releases under CERCLA or the Clean Water Act, the Decatur Field Office of the Alabama Department of Environmental Management, the City of Huntsville Hazardous Materials Response Team, the City of Huntsville Division of Natural Resources & Environmental Management, etc.]

Agency: _____
Contact Person (if known): _____
Telephone Number: _____

Agency: _____
Contact Person (if known): _____
Telephone Number: _____

Agency: _____
Contact Person (if known): _____
Telephone Number: _____

Agency: _____
Contact Person (if known): _____
Telephone Number: _____

Agency: _____
Contact Person (if known): _____
Telephone Number: _____

D. SCHEDULE OF COMPLIANCE

Identify any Best Management Practices, whether structural or non-structural, that are described in this Application but are not yet being fully implemented. Provide a schedule of implementation for each such BMP.
ATTACH ADDITIONAL SHEETS IF NECESSARY.

_____

_____

_____

_____

_____

_____

E. ADDITIONAL INFORMATION & ATTACHMENTS

List all attachments which are appended to, and constitute a part of this Application. This space may also be used to present any relevant information not adequately addressed in other parts of this Application.

_____

_____

_____

_____

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_____

I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE.

_____

(Signature of Responsible Official) (Title) (Date)

_____

(Printed Name of Responsible Official) (Title) (Date)

CITY OF HUNTSVILLE
DIVISION OF NATURAL RESOURCES & ENVIRONMENTAL MGT.
STORMWATER COMPLIANCE EVALUATION INSPECTION

Industry Name _____
Address _____

_____

Contact/Title _____ Phone _____
Other Participants _____

_____

Inspector _____ Inspection Date/Time _____

<u>Stormwater Associated with Industrial Activity</u>

Sources of Stormwater Discharge:

[ ] Process Wastewater
[ ] Materials Handling Areas
[ ] Materials Storage Areas
[ ] Fuel Storage Areas
[ ] Parking Area Runoff
[ ] Roof Runoff
[ ] Lawn Runoff
[ ] Other

_____

_____

_____

Number/ Identification of Discharge Points _____

_____

_____

Discharge Observations:

[ ] Oily Sheen [ ] Color _____ [ ] Foam _____
[ ] Turbid [ ] Clear [ ] No Discharge @ Time of Inspection

Outfall Description:

[ ] Pipe _____ [ ] Ditch [ ] Swale [ ] Other _____

_____

Outfall Appearance:

[ ] Clean [ ] Accumulated Sediment [ ] Accumulated Debris/Litter
[ ] Oil Stained [ ] Discolored [ ] Other [ ] N/A
[ ] Stressed Vegetation Notes _____

_____

Sample Collected: [ ] Yes [ ] No [ ] N/A pH _____

Recordkeeping

Copy of NPDES Permit Available	[ ] Yes	[ ] No	[ ] N/A
Copy of DMRs Available	[ ] Yes	[ ] No	[ ] N/A
Copy of SPCC Plan Available	[ ] Yes	[ ] No	[ ] N/A
Inspection Records Maintained/Adequate	[ ] Yes	[ ] No	[ ] N/A
Sampling/Analysis Information:			
Sample date, time, location	[ ] Yes	[ ] No	[ ] N/A
Analyses date & time	[ ] Yes	[ ] No	[ ] N/A
Methods Used	[ ] Yes	[ ] No	[ ] N/A
Equipment Calibration Records	[ ] Yes	[ ] No	[ ] N/A
Records Retention Adequate	[ ] Yes	[ ] No	[ ] N/A

Industrial Process Best Management Practices

Process Wastewater:

[ ] Routed to Sanitary Sewer [ ] NPDES Permitted Discharge
[ ] Unpermitted Surface Discharge [ ] Reclaimed/Reused
[ ] Other [ ] No Process Wastewater

Notes _____

_____

_____

Process Tanks:

[ ] Curbed [ ] Contained in Building [ ] Containment Adequate
[ ] Drain to Sump [ ] N/A Notes_____

_____

_____

Wastewater Treatment Tanks:

[ ] Curbed [ ] Contained in Building [ ] Containment Adequate
[ ] Drain to Sump [ ] N/A Notes _____

_____

_____

Other Industrial Process BMPs : _____

_____

_____

Materials Storage Best Management Practices:

Storage Piles [ ] Exposed to Stormwater [ ] Under Roof
[ ] Drain to Treatment System [ ] Other BMP [ ] N/A
Notes _____
_____
_____

Material (Un)loading [ ] Exposed to Stormwater [ ] Under Roof
[ ] Curbed/ Bermed [ ] Drain to Treatment System [ ] Other BMP
[ ] Containment Adequate [ ] Locking Drain Valve [ ] N/A
Notes _____
_____
_____

Raw Materials (Bulk) [ ] Exposed to Stormwater [ ] Under Roof
[ ] Curbed/ Bermed [ ] Drain to Treatment System [ ] Other BMP
[ ] Containment Adequate [ ] Locking Drain Valve [ ] N/A
Notes _____
_____
_____

Fuel /Oil Storage (Bulk) [ ] Exposed to Stormwater [ ] Under Roof
[ ] Curbed/ Bermed [ ] Drain to Treatment System [ ] Other BMP
[ ] Containment Adequate [ ] Locking Drain Valve [ ] N/A
Notes _____
_____
_____

Raw materials (Drum) [ ] Exposed to Stormwater [ ] Under Roof
[ ] Curbed/ Bermed [ ] Drain to Treatment System [ ] Other BMP
[ ] Containment Adequate [ ] Locking Drain Valve [ ] N/A
Notes _____
_____
_____

Oil Storage (Drum) [ ] Exposed to Stormwater [ ] Under Roof
[ ] Curbed/ Bermed [ ] Drain to Treatment System [ ] Other BMP
[ ] Containment Adequate [ ] Locking Drain Valve [ ] N/A
Notes _____

Materials Storage Best Management Practices:

Waste materials [ ] Exposed to Stormwater [ ] Under Roof
[ ] Curbed/ Bermed [ ] Drain to Treatment System [ ] Other BMP
[ ] Containment Adequate [ ] Locking Drain Valve [ ] N/A

Notes _____

Comments _____

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Reach Code:		Outfall ID:	
Date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall Last 24 hours: (in.) Last 48 hours: (in.)		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other:_____
- Known Industries:_____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☐ Circular ☐ Elliptical ☐ Box ☐ Other:	☐ Single ☐ Double ☐ Triple ☐ Other:	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ Rip-rap ☐ Other:	☐ Trapezoid ☐ Parabolic ☐ Other:		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No ***If No, Skip to Section 5***				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
Flow Method 1	Volume		Liter	Bottle
	Time to fill		Seconds	Stop watch
Flow Method 2	Flow depth		Inches	Tape measure
	Flow width		Feet, Inches	Tape measure
	Length of travel		Feet, Inches	Tape measure
	Time of travel		Seconds	Stop watch
Temperature			°F	Thermometer
pH			pH Standard Units	Probe
Ammonia			mg/L	Test strip
Chlorine (optional)			mg/L	Test strip / probe

OUTFALL RECONNAISSANCE INVENTORY FIELD SHEET

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables (Not including trash)	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	☐ Yes	☐ No	
2. If yes, collected from:	☐ Flow	☐ Pool	
3. Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Appendix F Additional Tables

Non-Industrial Major Outfalls
Huntsville MS4

Outfall ID	Creek or River Name	Basin	Outfall Type	Number of Lines	Number of Barrels	Diameter	Rise	Span	Material	Create Date	Northing	Easting
NI_1	Aldridge Creek	Aldridge	Pipe - Circular	2		36			Concrete	6/26/2006	1487157.096	439628.544
NI_2	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	6/26/2006	1488671.297	441065.1452
NI_3	Aldridge Creek	Aldridge	Pipe - Circular	2		48			Concrete	6/26/2006	1489279.366	441310.8871
NI_4	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	6/26/2006	1490072.782	441649.355
NI_5	Aldridge Creek	Aldridge	Pipe - Circular	1		66			Concrete	2/14/2008	1490658.397	441835.742
NI_6	Aldridge Creek	Aldridge	Pipe - Circular	1		54			CMP	11/10/2005	1491576.796	442309.6771
NI_7	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	6/17/1999	1492704.539	442298.4609
NI_8	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	4/3/2015	1493262.127	442128.541
NI_9	Aldridge Creek	Aldridge	Pipe - Circular	1		48			CMP	4/3/2015	1493233.967	442140.7949
NI_10	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	4/3/2015	1493282.301	442107.9203
NI_11	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	4/3/2015	1493258.802	441948.0099
NI_12	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	4/2/2015	1494150.179	442061.0054
NI_13	Aldridge Creek	Aldridge	Pipe - Circular	1		82			CMP	6/16/1999	1494015.614	442179.9353
NI_14	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	4/2/2015	1494622.297	442157.2549
NI_15	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	6/16/1999	1494773.625	442330.2187
NI_16	Aldridge Creek	Aldridge	Pipe - Circular	3		36			Concrete	6/30/1999	1495939.787	442307.7247
NI_17	Aldridge Creek	Aldridge	Pipe - Circular	3		36			Concrete	6/29/1999	1496549.421	442327.6197
NI_18	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	6/29/1999	1496869.038	442462.5282
NI_19	Aldridge Creek	Aldridge	Pipe - Arch	1			31	51	Concrete	11/3/2005	1497410.971	442348.2676
NI_20	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	11/3/2005	1497640.075	442347.4822
NI_21	Aldridge Creek	Aldridge	Pipe - Circular	2		36			Concrete	11/3/2005	1498005.864	442398.0615
NI_22	Aldridge Creek	Aldridge	Pipe - Circular	2		48			Concrete	12/16/2011	1499571.127	442916.9387
NI_23	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	8/14/2012	1501156.367	443257.0315
NI_24	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	8/28/2012	1501166.024	443377.8334
NI_25	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	8/28/2012	1501171.656	443379.1297
NI_26	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	12/29/2011	1501627.761	443544.4266
NI_27	Aldridge Creek	Aldridge	Pipe - Circular	3		1-24 and 2-48			Concrete	8/28/2012	1502371.008	443912.7248
NI_28	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	12/29/2011	1503021.208	443657.6282
NI_29	Aldridge Creek	Aldridge	Pipe - Arch	2			36	58	Concrete	8/14/2012	1503161.576	443765.0013
NI_30	Aldridge Creek	Aldridge	Pipe - Circular	3		48			Concrete	8/16/2012	1503901.882	443575.19
NI_31	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	12/29/2011	1504274.75	443355.5313
NI_32	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	7/12/2019	1506874.622	443324.3651
NI_33	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	7/12/1999	1507614.5	443217.9686
NI_34	Aldridge Creek	Aldridge	Pipe - Arch	1			56	73	Concrete	7/9/1999	1508842.046	442961.1348
NI_35	Aldridge Creek	Aldridge	Pipe - Circular	3		54			Concrete	7/12/1999	1509204.81	442984.7519
NI_36	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	7/12/1999	1509170.743	442911.9889
NI_37	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	7/6/1999	1509292.375	442951.375
NI_38	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	7/1/1999	1509784.88	442433.8245
NI_39	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	7/6/1999	1510742.877	442186.3221
NI_40	Aldridge Creek	Aldridge	Pipe - Arch	1			26	43	Concrete	11/29/2018	1511455.512	441840.3247
NI_41	Aldridge Creek	Aldridge	Pipe - Arch	1			26	43	Concrete	11/29/2018	1511460.227	441842.034
NI_42	Aldridge Creek	Aldridge	Pipe - Circular	2		24			Concrete	7/6/1999	1511564.785	441880.4231
NI_43	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	5/27/1999	1511928.277	441811.5843
NI_44	Aldridge Creek	Aldridge	Pipe - Circular	2		42			Concrete	5/25/1999	1512707.686	441475.8356
NI_45	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	9/23/2004	1512298.703	441648.4895
NI_46	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	5/14/1999	1514367.924	439290.965
NI_47	Aldridge Creek	Aldridge	Pipe - Circular	2		42			Concrete	3/2/2004	1514698.714	439357.9878
NI_48	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	5/4/1999	1515452.42	439429.382
NI_49	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	5/4/1999	1515459.591	439429.241
NI_50	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	3/2/2004	1515010.972	439383.0403
NI_51	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	10/2/2004	1515639.329	439454.6021
NI_52	Aldridge Creek	Aldridge	Pipe - Circular	2		24			Concrete	3/1/2004	1516977.671	439813.9032

Non-Industrial Major Outfalls
Huntsville MS4

Outfall ID	Creek or River Name	Basin	Outfall Type	Number of Lines	Number of Barrels	Diameter	Rise	Span	Material	Create Date	Northing	Easting
NI_53	Aldridge Creek	Aldridge	Pipe - Circular	1		66			Concrete	3/1/2004	1517333.159	440025.4638
NI_54	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	2/13/1998	1518705.594	440439.6461
NI_55	Aldridge Creek	Aldridge	Pipe - Circular	2		48			Concrete	2/13/1998	1518622.875	440500.3753
NI_56	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	11/2/2006	1519932.993	441085.6087
NI_57	Aldridge Creek	Aldridge	Pipe - Circular	4		48			Concrete	8/10/2005	1527217.18	440820.7503
NI_58	Aldridge Creek	Aldridge	Pipe - Circular	2		42			Concrete	8/10/2005	1527085.569	440795.4905
NI_59	Aldridge Creek	Aldridge	Pipe - Circular	1		36			Concrete	8/11/2005	1527955.827	440731.9165
NI_60	Aldridge Creek	Aldridge	Pipe - Circular	2		48			Concrete	6/30/1998	1528427.006	440512.2992
NI_61	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	6/30/1998	1528747.052	440336.163
NI_62	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	6/17/1998	1530703.764	439786.7845
NI_63	Aldridge Creek	Aldridge	Pipe - Circular	4		3-48 1-18			Concrete	6/17/1998	1530628.969	439935.0191
NI_64	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	6/12/1998	1530717.782	438833.7408
NI_65	Aldridge Creek	Aldridge	Pipe - Circular	2		36			Concrete	6/9/1998	1531524.698	438810.4092
NI_66	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Steel	4/14/2005	1532203.645	438370.5187
NI_67	Aldridge Creek	Aldridge	Pipe - Circular	1		48			Concrete	4/14/2005	1532264.113	438355.8678
NI_68	Aldridge Creek	Aldridge	Pipe - Arch	1			54	88	Concrete	6/9/1998	1532925.826	438414.2246
NI_69	Aldridge Creek	Aldridge	Pipe - Circular	2		48			Concrete	7/8/2005	1533563.759	439084.6855
NI_70	Aldridge Creek	Aldridge	Pipe - Circular	2		54			Concrete	7/21/2005	1533646.334	440068.7954
NI_71	Aldridge Creek	Aldridge	Pipe - Circular	1		42			Concrete	6/22/1998	1534226.375	441180.8749
NI_72	Aldridge Creek	Aldridge	Pipe - Circular	2		42			Concrete	6/22/1998	1534471.625	441292.2504
NI_73	Aldridge Creek	Aldridge	Culvert - Box		1		8	28	Concrete	6/26/2006	1487474.711	440213.0967
NI_74	Aldridge Creek	Aldridge	Culvert - Other		1		30	100	Concrete	10/7/2004	1495137.071	442216.4683
NI_75	Aldridge Creek	Aldridge	Culvert - Other		1		10	40	Concrete	11/4/2005	1500093.834	442856.4956
NI_76	Aldridge Creek	Aldridge	Culvert - Box		1		4	8	Concrete	7/20/1999	1505265.625	443120.8126
NI_77	Big Cove	Big Cove	Culvert - Box		2		5	8	Concrete	3/1/2003	1516609.356	460526.662
NI_78	Big Cove Creek	Big Cove	Pipe - Circular	2		42			Concrete	4/1/2003	1533131.375	448638.1563
NI_79	Big Cove Creek	Big Cove	Pipe - Circular	1		48			Concrete	4/1/2003	1532815.75	449346.9062
NI_80	Big Cove Creek	Big Cove	Pipe - Circular	2		48			Concrete	4/1/2003	1532433.625	449797.8747
NI_81	Big Cove Creek	Big Cove	Pipe - Circular	2		48			Concrete	4/23/2003	1515330.875	461077.719
NI_82	Big Cove Creek	Big Cove	Pipe - Circular	1		42			Concrete	4/1/2003	1515629.974	460850.7759
NI_83	Big Cove Creek	Big Cove	Pipe - Circular	1		36			Concrete	7/9/2008	1514373.624	461203.2128
NI_84	Big Cove Creek	Big Cove	Pipe - Circular	2		24			Concrete	7/24/2007	1514325.821	461865.762
NI_85	Big Cove Creek	Big Cove	Pipe - Circular	2		30			Concrete	3/4/2003	1514157.939	461961.5535
NI_86	Big Cove Creek	Big Cove	Pipe - Circular	1		48			Concrete	4/4/2003	1513983.426	462015.0701
NI_87	Big Cove Creek	Big Cove	Pipe - Circular	2		18			Concrete	8/17/2006	1510799.916	464418.2064
NI_88	Big Cove Creek	Big Cove	Pipe - Circular	2		18			Steel	8/17/2006	1510809.319	464423.8005
NI_89	Broglan Creek	Broglan	Pipe - Circular	2		1-15 1-36			Concrete	3/15/1999	1554940.489	416790.2807
NI_90	Broglan Creek	Broglan	Pipe - Circular	2		48			Concrete	2/25/2010	1553156.284	417732.0593
NI_91	Broglan Creek	Broglan	Pipe - Circular	1		78			CMP	2/24/1998	1550729.996	417940.0828
NI_92	Broglan Creek	Broglan	Pipe - Circular	3		42			Concrete	3/17/1999	1549646.75	417884.9684
NI_93	Broglan Creek	Broglan	Pipe - Circular	2		36			Concrete	6/10/2004	1549379.256	417978.068
NI_94	Broglan Creek	Broglan	Pipe - Circular	2		60			Concrete	1/14/1998	1548825.508	418079.2102
NI_95	Broglan Creek	Broglan	Culvert - Box		2		6	8	Concrete	6/10/2004	1549075.639	418061.5507
NI_96	Broglan Creek	Broglan	Pipe - Circular	1		48			Concrete	1/13/1998	1544644.23	419739.8919
NI_97	Broglan Creek	Broglan	Pipe - Circular	1		72			Concrete	1/20/1998	1544866.616	419594.1802
NI_98	Broglan Creek	Broglan	Pipe - Circular	1		48			Concrete	8/10/2017	1543201.256	420719.8463
NI_99	Broglan Creek	Broglan	Pipe - Circular	1		36			Concrete	8/6/1997	1542561.797	421084.9771
NI_100	Broglan Creek	Broglan	Pipe - Circular	1		48			Concrete	8/7/1997	1541813.149	421728.7239
NI_101	Broglan Creek	Broglan	Pipe - Circular	1		60			Concrete	8/6/1997	1541824.158	421795.3113
NI_102	Broglan Creek	Broglan	Pipe - Circular	1		54			Concrete	8/4/1997	1541389	422097.0932
NI_103	Broglan Creek	Broglan	Pipe - Circular	1		36			Concrete	8/4/1997	1540825.564	422389.9302
NI_104	Broglan Creek	Broglan	Pipe - Circular	1		36			Concrete	6/30/1997	1536726.089	426712.5207

Non-Industrial Major Outfalls
Huntsville MS4

Outfall ID	Creek or River Name	Basin	Outfall Type	Number of Lines	Number of Barrels	Diameter	Rise	Span	Material	Create Date	Northing	Easting
NI_105	Copperrun Creek	Copperrun	Culvert - Box		1		5	8	Concrete	6/25/2005	1554705.472	366430.7875
NI_106	Dallas Creek	Dallas	Pipe - Circular	3		2-48 1-15			Concrete	4/15/1998	1550320.747	440165.1552
NI_107	Dallas Creek	Dallas	Pipe - Arch	2			40	65	Concrete	4/15/1998	1549839.484	440268.6126
NI_108	Dallas Creek	Dallas	Pipe - Circular	1		42			Concrete	4/14/1998	1549678.027	439362.9301
NI_109	Dallas Creek	Dallas	Pipe - Circular	2		66			CMP	4/23/1998	1549688.727	439694.9248
NI_110	Dallas Creek	Dallas	Pipe - Circular	1		48			Concrete	11/19/2004	1549231.253	439333.9974
NI_111	Dallas Creek	Dallas	Pipe - Circular	1		66			Concrete	5/13/2004	1548472.896	439246.617
NI_112	Dallas Creek	Dallas	Pipe - Circular	3		60			Concrete	5/21/2004	1547199.724	438678.1572
NI_113	Dallas Creek	Dallas	Pipe - Circular	1		42			Concrete	5/13/2004	1546810.072	437837.5207
NI_114	Dallas Creek	Dallas	Pipe - Circular	1		36			Concrete	5/20/2004	1545912.01	437079.7506
NI_115	Dallas Creek	Dallas	Pipe - Circular	1		42			Concrete	5/21/2004	1545994.174	437156.5247
NI_116	Dallas Creek	Dallas	Pipe - Circular	1		60			Concrete	5/19/2004	1545752.831	436588.9369
NI_117	Dallas Creek	Dallas	Pipe - Circular	2		42			Concrete	10/8/2014	1545910.03	435542.3209
NI_118	Dallas Creek	Dallas	Pipe - Circular	2		18			Concrete	5/15/2004	1545611.978	434771.4763
NI_119	Dallas Creek	Dallas	Pipe - Circular	1		36			Concrete	5/15/2004	1545586.749	434800.0307
NI_120	Dallas Creek	Dallas	Pipe - Circular	1		36			Concrete	5/14/2004	1545368.488	434023.3463
NI_121	Dallas Creek	Dallas	Pipe - Circular	1		36			CMP	5/15/2004	1545337.855	434022.863
NI_122	Dallas Creek	Dallas	Pipe - Circular	1		84			CMP	9/29/2014	1545407.051	434262.8107
NI_123	Dallas Creek	Dallas	Pipe - Circular	1		36			Concrete	2/19/1998	1545636.12	432127.0512
NI_124	Dallas Creek	Dallas	Pipe - Circular	2		36			Concrete	2/20/1998	1545612.039	431921.1828
NI_125	Dry Creek	Dry	Pipe - Arch	1			44	72	CMP	10/11/2016	1574909.157	419608.2002
NI_126	Dry Creek	Dry	Pipe - Arch	1			26	43	Concrete	7/28/2004	1574203.007	413283.3851
NI_127	Dry Creek	Dry	Pipe - Arch	1			31	51	Concrete	12/29/2004	1573012.722	412032.1996
NI_128	Dry Creek	Dry	Pipe - Circular	1		36			Concrete	12/29/2004	1572706.356	411726.7983
NI_129	Dry Creek	Dry	Pipe - Circular	1		36			Concrete	4/27/2007	1562660.173	402042.4217
NI_130	Dry Creek	Dry	Pipe - Circular	1		48			Concrete	6/25/2009	1550078.807	400113.3757
NI_131	Dry Creek	Dry	Pipe - Circular	1		36			Concrete	6/14/2013	1548756.287	398925.5601
NI_132	Fagan Creek	Fagan	Pipe - Circular	1		60			Concrete	5/7/2014	1537570.141	430438.8524
NI_133	Fagan Creek	Fagan	Pipe - Circular	1		42			Concrete	7/11/1997	1537593.926	430841.1177
NI_134	Fagan Creek	Fagan	Pipe - Circular	1		54			Concrete	7/14/1997	1537834.275	431724.1022
NI_135	Fagan Creek	Fagan	Pipe - Circular	1		54			Concrete	7/14/1997	1537910.57	431957.0098
NI_136	Fagan Creek	Fagan	Pipe - Circular	1		36			Concrete	7/17/1997	1537723.466	432174.1741
NI_137	Fagan Creek	Fagan	Pipe - Circular	1		48			Concrete	7/16/1997	1537135.369	433264.3648
NI_138	Fagan Creek	Fagan	Pipe - Circular	1		48			Concrete	7/16/1997	1537152.658	433619.8556
NI_139	Fagan Creek	Fagan	Pipe - Circular	1		66			Concrete	6/2/1998	1537144.186	434176.0559
NI_140	Fagan Creek	Fagan	Pipe - Circular	1		48			Concrete	6/5/1998	1537223.516	434887.9439
NI_141	Fagan Creek	Fagan	Pipe - Circular	1		72			Concrete	6/3/1998	1537488.918	435101.5954
NI_142	Fagan Creek	Fagan	Pipe - Circular	1		36			Concrete	6/3/1998	1537478.483	435238.3464
NI_143	Fagan Creek	Fagan	Pipe - Circular	1		36			Concrete	6/12/1998	1537736.841	437297.8591
NI_144	Fagan Creek	Fagan	Pipe - Circular	2		48			Concrete	6/12/1998	1537842.114	437767.075
NI_145	Fagan Creek	Fagan	Pipe - Circular	1		36			CMP	6/16/1998	1540978.144	438187.1437
NI_146	Fagan Creek	Fagan	Pipe - Circular	2		36			CMP	6/15/1998	1540883.125	438196.7811
NI_147	Fagan Creek	Fagan	Pipe - Circular	1		36			Concrete	6/15/1998	1539501.125	438011.875
NI_148	Fagan Creek	Fagan	Pipe - Circular	1		78			Concrete	6/16/1998	1539658.837	438140.7091
NI_149	Fagan Creek	Fagan	Pipe - Circular	1		60			Concrete	6/15/1998	1538673.223	438072.1203
NI_150	Fagan Creek	Fagan	Pipe - Circular	1		36			Concrete	6/12/1998	1538663.801	438092.301
NI_151	Mountain Brook Branch	Fagan	Pipe - Circular	1		48			Concrete	6/12/1998	1537683.328	439081.8329
NI_152	Mountain Brook Branch	Fagan	Pipe - Circular	1		36			Concrete	6/16/1998	1537551.573	439473.6208
NI_153	Mountain Brook Branch	Fagan	Pipe - Circular	1		42			Concrete	6/16/1998	1537360.806	439802.5233
NI_154	Mountain Brook Branch	Fagan	Pipe - Circular	1		48			Concrete	6/17/1998	1537608.655	440157.3993
NI_155	Mountain Brook Branch	Fagan	Pipe - Circular	1		36			Concrete	6/16/1998	1537504.115	440794.1821
NI_156	Mountain Brook Branch	Fagan	Pipe - Circular	1		36			Concrete	6/16/1998	1537640.307	440775.5919

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Outfall ID	Creek or River Name	Basin	Outfall Type	Number of Lines	Number of Barrels	Diameter	Rise	Span	Material	Create Date	Northing	Easting
NI_157	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	2		48			Concrete	7/11/1997	1534101.749	427528.2982
NI_158	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	1		66			Concrete	7/2/1997	1532101.62	427361.3196
NI_159	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	1		66			Concrete	7/2/1997	1532107.343	427368.3126
NI_160	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	1		48			Concrete	9/25/2013	1527186.491	426682.1319
NI_161	Huntsville Spring Creek	Huntsville Spring	Pipe - Arch	1			78	126	CMP	5/24/2018	1527650.243	426711.2168
NI_162	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	1		48			Concrete	9/25/2013	1527191.865	426682.2415
NI_163	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	1		72			Concrete	10/18/2007	1517429.112	425158.8518
NI_164	Huntsville Spring Creek	Huntsville Spring	Pipe - Circular	1		72			Concrete	6/30/2010	1517448.227	425160.3623
NI_165	Huntsville Spring Creek	Huntsville Spring	Culvert - Box		3		4	5	Concrete	7/14/1997	1534498.941	427595.6216
NI_166	Huntsville Spring Creek	Huntsville Spring	Culvert - Box		1		4	13	Concrete	7/11/1997	1533718.435	427590.4703
NI_167	Huntsville Spring Creek	Huntsville Spring	Culvert - Box		1		6	12	Concrete	10/16/2007	1517915.465	424899.8399
NI_168	Huntsville Spring Creek	Huntsville Spring	Culvert - Box		2		6	6	Concrete	7/12/2004	1530825.283	427449.2695
NI_169	Indian Creek	Indian	Pipe - Arch	3			15	26	Concrete	7/28/2006	1550632.163	396122.4132
NI_170	Indian Creek	Indian	Pipe - Circular	1		36			Concrete	5/10/2016	1550518.773	396017.9921
NI_171	Indian Creek	Indian	Pipe - Arch	3			15	26	Concrete	7/28/2006	1550406.555	396531.3241
NI_172	Indian Creek	Indian	Pipe - Circular	3		18			Concrete	7/28/2006	1550258.162	396646.2829
NI_173	Indian Creek	Indian	Pipe - Circular	2		18			Concrete	7/28/2006	1549822.75	396858.8202
NI_174	Indian Creek	Indian	Pipe - Arch	3			18	28	Concrete	7/28/2006	1549681.885	396934.2712
NI_175	Indian Creek	Indian	Pipe - Circular	1		36			Concrete	3/30/2005	1547658.653	396596.9959
NI_176	Indian Creek	Indian	Pipe - Circular	2		18			Concrete	7/28/2006	1548452.372	397287.0451
NI_177	Indian Creek	Indian	Pipe - Arch	3			19	24	Concrete	7/28/2006	1548715.004	397391.9592
NI_178	Indian Creek	Indian	Pipe - Circular	1		18			Concrete		1548776.944	397518.6552
NI_179	Indian Creek	Indian	Pipe - Circular	3		42			Concrete	11/9/2009	1543294.269	394966.8446
NI_180	Indian Creek	Indian	Pipe - Circular	1		42			Concrete	11/6/2009	1542640.176	395678.8816
NI_181	Indian Creek	Indian	Pipe - Elliptical	4			34	53	Concrete	11/6/2009	1542337.016	395929.7374
NI_182	Indian Creek	Indian	Pipe - Circular	2		24			Concrete	11/6/2009	1542190.199	395936.6921
NI_183	Indian Creek	Indian	Pipe - Circular	1		36			Concrete	8/1/2007	1539248.905	395208.357
NI_184	Indian Creek	Indian	Pipe - Circular	3		18			Concrete	8/6/2007	1538430.764	394885.31
NI_185	Indian Creek	Indian	Pipe - Circular	3		18			Concrete	8/6/2007	1538646.3	395010.3409
NI_186	Indian Creek	Indian	Pipe - Circular	2		24			Concrete	8/6/2007	1536069.987	395318.8741
NI_187	Indian Creek	Indian	Pipe - Circular	2		18			Concrete		1535147.234	395370.8301
NI_188	Indian Creek	Indian	Pipe - Circular	2		18			Concrete	8/6/2007	1534813.197	395280.722
NI_189	Knox Creek	Knox	Pipe - Circular	2		42			Concrete	3/25/2004	1550391.652	373751.915
NI_190	Knox Creek	Knox	Pipe - Circular	1		42			Concrete	3/26/2004	1550304.95	375009.8275
NI_191	Knox Creek	Knox	Pipe - Circular	1		42			Concrete	11/1/2010	1552776.713	377629.2041
NI_192	Knox Creek	Knox	Pipe - Arch	2			36	58	Concrete	9/14/2006	1555100.43	385236.0537
NI_193	Knox Creek	Knox	Pipe - Circular	4		24			Concrete	12/4/2006	1554181.603	384347.6323
NI_194	Knox Creek	Knox	Pipe - Circular	3		30			Concrete	12/4/2006	1554079.896	384248.7434
NI_195	Knox Creek	Knox	Pipe - Circular	1		36			Concrete	5/14/2007	1552467.028	377091.7751
NI_196	Knox Creek	Knox	Pipe - Circular	1		36			Concrete	3/24/2004	1550609.003	373010.3738
NI_197	Big Cove Creek	Lower Flint	Pipe - Circular	5		36			Concrete	8/17/2006	1508851.087	466045.5585
NI_198	McDonald Creek	McDonald	Pipe - Circular	1		54			Concrete	6/5/1997	1523018.25	418801.7189
NI_199	McDonald Creek	McDonald	Pipe - Arch	1			31	51	Concrete	6/6/1997	1523914.75	418939.5624
NI_200	McDonald Creek	McDonald	Pipe - Circular	1		36			Concrete	6/5/1997	1524624.125	418922.8125
NI_201	McDonald Creek	McDonald	Pipe - Circular	2		30			Concrete	6/6/1997	1525034.25	418972.4689
NI_202	McDonald Creek	McDonald	Pipe - Circular	2		54			Concrete	6/6/1997	1525377.875	418701.5626
NI_203	McDonald Creek	McDonald	Pipe - Circular	3		54			Concrete	6/11/1997	1525603.25	418655.9377
NI_204	McDonald Creek	McDonald	Pipe - Circular	1		36			Concrete	6/9/1997	1526319.5	417793.2186
NI_205	McDonald Creek	McDonald	Pipe - Circular	2		24			Concrete	6/10/1997	1526128.249	417463.3918
NI_206	McDonald Creek	McDonald	Pipe - Circular	1		36			Concrete	5/5/2004	1533718.513	413609.2542
NI_207	McDonald Creek	McDonald	Pipe - Circular	1		60			Concrete	10/1/1998	1540921.75	409432.3436
NI_208	McDonald Creek	McDonald	Pipe - Circular	2		36			Concrete	10/1/1998	1541730.901	409391.0484

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Outfall ID	Creek or River Name	Basin	Outfall Type	Number of Lines	Number of Barrels	Diameter	Rise	Span	Material	Create Date	Northing	Easting
NI_209	McDonald Creek	McDonald	Culvert - Box		1		4	6	Concrete	10/14/1998	1542736.375	409714.7814
NI_210	McDonald Creek	McDonald	Pipe - Circular	2		60			Concrete	10/14/1998	1542836.287	409433.818
NI_211	McDonald Creek	McDonald	Pipe - Circular	2		56			CMP	10/14/1998	1542763.236	409657.9967
NI_212	McDonald Creek	McDonald	Pipe - Arch	1			26	45	Concrete	10/20/1998	1543106.83	408626.8859
NI_213	McDonald Creek	McDonald	Pipe - Arch	1			62	102	Concrete	6/16/2005	1545205.014	407797.5519
NI_214	McDonald Creek	McDonald	Pipe - Arch	1			62	102	Concrete	6/16/2005	1545204.077	407810.5207
NI_215	McDonald Creek	McDonald	Pipe - Circular	1		36			Concrete	6/6/2012	1548357.034	405999.5142
NI_216	Copperrun Creek	NoValue	Pipe - Circular	1		36			Concrete	3/8/2005	1563654.598	370268.2093
NI_217	Copperrun Creek	NoValue	Pipe - Arch	2			36	60	CMP	6/27/2005	1563881.177	370344.7282
NI_218	Copperrun Creek	NoValue	Pipe - Circular	2		36			Concrete	11/3/2006	1564326.489	370343.2085
NI_219	Copperrun Creek	NoValue	Pipe - Circular	1		36			CMP		1565222.639	370790.1522
NI_220	Copperrun Creek	NoValue	Pipe - Circular	1		36			Concrete	11/3/2006	1564888.197	370605.9924
NI_221	Copperrun Creek	NoValue	Pipe - Circular	1		36			Concrete	7/28/2005	1560067.297	368967.4311
NI_222	Peevey Creek	Peevey	Pipe - Circular	2		36			Concrete	6/30/2008	1527536.934	466548.8908
NI_223	Peevey Creek	Peevey	Pipe - Circular	1		54			Concrete	11/10/2010	1524548.396	469026.3822
NI_224	Peevey Creek	Peevey	Pipe - Circular	1		42			Concrete	11/19/2010	1524531.722	469096.5215
NI_225	Peevey Creek	Peevey	Pipe - Circular	1		36			Concrete	3/22/2003	1524220.609	469402.7309
NI_226	Peevey Creek	Peevey	Pipe - Circular	1		42			Concrete	3/22/2003	1523861.76	469739.2971
NI_227	Peevey Creek	Peevey	Pipe - Circular	8		15			Concrete	3/21/2003	1523193.942	470269.6848
NI_228	Peevey Creek	Peevey	Pipe - Circular	1		36			Concrete	3/22/2003	1522820.002	470603.0349
NI_229	Peevey Creek	Peevey	Pipe - Circular	1		36			Concrete	3/19/2003	1521989	471177.4537
NI_230	Peevey Creek	Peevey	Pipe - Circular	1		48			Concrete	11/19/2010	1522050.681	471349.6692
NI_231	Peevey Creek	Peevey	Pipe - Circular	2		48			Concrete	11/19/2010	1522103.533	471351.3579
NI_232	Fagan Creek	Pinhook	Pipe - Circular	3		48			Concrete	7/7/2006	1537735.23	428543.4927
NI_233	Fagan Creek	Pinhook	Pipe - Circular	1		48			Concrete	7/1/1997	1537733.323	428555.2814
NI_234	Huntsville Spring Creek	Pinhook	Pipe - Circular	2		36			Concrete	6/30/1997	1537564.45	428069.3217
NI_235	Huntsville Spring Creek	Pinhook	Pipe - Elliptical	1			38	60	Concrete	7/1/1997	1537007.452	427990.0847
NI_236	Huntsville Spring Creek	Pinhook	Pipe - Arch	2			36	58	CMP	7/2/1997	1536461.841	427682.0942
NI_237	Huntsville Spring Creek	Pinhook	Pipe - Circular	1		36			Concrete	2/11/2016	1536770.654	427913.8414
NI_238	Huntsville Spring Creek	Pinhook	Pipe - Circular	1		36			Concrete	7/2/1997	1536417.678	427649.6152
NI_239	Huntsville Spring Creek	Pinhook	Pipe - Circular	2		48			Concrete	8/1/2011	1536007.974	427634.8771
NI_240	Pinhook Creek	Pinhook	Pipe - Circular	1		42			Concrete	7/1/2004	1557868.478	427978.4863
NI_241	Pinhook Creek	Pinhook	Pipe - Circular	1		36			Concrete	6/29/2004	1557816.976	427896.3365
NI_242	Pinhook Creek	Pinhook	Pipe - Circular	1		36			Concrete	7/1/2004	1557157.672	428189.7011
NI_243	Pinhook Creek	Pinhook	Pipe - Circular	1		52			Concrete	6/30/2004	1556283.611	428227.9215
NI_244	Pinhook Creek	Pinhook	Pipe - Circular	1		36			Concrete	7/1/2004	1554919.074	428293.5798
NI_245	Pinhook Creek	Pinhook	Pipe - Circular	1		52			Concrete	6/30/2004	1554833.228	428344.0584
NI_246	Pinhook Creek	Pinhook	Pipe - Circular	1		42			Concrete	3/13/1998	1554340.125	428396.9372
NI_247	Pinhook Creek	Pinhook	Pipe - Circular	2		18			Concrete	1/16/1997	1547646.25	428681.4373
NI_248	Pinhook Creek	Pinhook	Pipe - Circular	2		36			Concrete	7/18/2005	1545050.356	428686.31
NI_249	Pinhook Creek	Pinhook	Pipe - Circular	1		42			Concrete	8/28/1997	1542805.506	427749.3657
NI_250	Pinhook Creek	Pinhook	Pipe - Circular	1		60			Concrete	9/2/1997	1539757.466	427503.0443
NI_251	Pinhook Creek	Pinhook	Pipe - Circular	1		36			Concrete	4/10/2013	1538970.468	427651.1805
NI_252	Pinhook Creek	Pinhook	Pipe - Circular	1		36			Concrete	7/15/2009	1537858.937	428196.1394
NI_253	Pinhook Creek	Pinhook	Culvert - Box		1		5	10	Concrete	6/7/2005	1537851.866	428315.7701
NI_254	Pinhook Creek	Pinhook	Culvert - Box		1		4	4	Masonry	2/19/2015	1538531.954	428042.3375
NI_255	Robinson Mill Creek	Robinson Mill	Pipe - Circular	3		2-42 1-30			2-42" Concrete; 1-30" Ductile Iron	8/25/2010	1522579.695	475236.5082
NI_256	Robinson Mill Creek	Robinson Mill	Culvert - Box		1		4	5	Concrete	4/4/2003	1514026.651	468141.0671

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Outfall ID	Creek or River Name	Basin	Facility ID	Northing	Easting
I_1	Aldridge Creek	Aldridge	ALD_1, ALD_3	1490492.606	441651.0062
I_2	Aldridge Creek	Aldridge	ALD_4	1492412.422	442215.8771
I_3	Aldridge Creek	Aldridge	ALD_2	1486076.765	438799.8111
I_4	Aldridge Creek	Aldridge	ALD_2	1486605.36	438780.6852
I_5	Aldridge Creek	Aldridge	ALD_2	1486815.988	439060.6354
I_6	Aldridge Creek	Aldridge	ALD_2	1486919.467	439194.0731
I_7	Barren Fork Creek	Barren Fork	IND_1	1505660.953	379695.2082
I_8	Barren Fork Creek	Barren Fork	IND_1	1506434.677	379959.6614
I_9	Barren Fork Creek	Barren Fork	IND_1, IND_14, IND_16	1506832.561	380062.4119
I_10	Limestone Creek	Barren Fork	IND_17	1503585.973	377138.8442
I_11	Beaverdam-Limestone Creek	Beaverdam-Limestone	LIM_5, LIM_6, IND_17	1508206.576	363120.6869
I_12	Beaverdam-Limestone Creek	Beaverdam-Limestone	LIM_1	1521315.918	360735.4895
I_13	Limestone Creek	Beaverdam-Limestone	LIM_2 thru LIM_4	1505661.359	351134.0803
I_14	Beaverdam-Madison Creek	Beaverdam-Madison	FLI_1	1572654.012	434689.9719
I_15	Barren Fork Creek	Betts Spring	IND_4	1525892.546	391763.7648
I_16	Barren Fork Creek	Betts Spring	IND_5, IND_7	1516987.881	383849.8131
I_17	Barren Fork Creek	Betts Spring	IND_3, IND_13	1513148.899	382992.0979
I_18	Bradford Creek	Betts Spring	IND_2	1510409.483	382836.6901
I_19	Big Cove Creek	Big Cove	FLI_2	1526289.038	454016.1606
I_20	Tennessee River	Blackwell Swamp	IND_8, IND_61	1492458.714	376479.464
I_21	Pinhook Creek	Blue Spring	SPR_1 thru SPR_3	1558139.246	421005.0166
I_22	Barren Fork Creek	Bradford	IND_25	1508091.087	379941.3517
I_23	Bradford Creek	Bradford	IND_25	1508641.774	380437.6148
I_24	Bradford Creek	Bradford	IND_13	1513993.313	379592.9289
I_25	Bradford Creek	Bradford	IND_6, IND_10, IND_18, IND_19	1516653.943	379769.4797
I_26	Bradford Creek	Bradford	IND_15	1512891.187	379100.7018
I_27	Bradford Creek	Bradford	IND_15	1512297.845	379268.0345
I_28	Bradford Creek	Bradford	IND_24	1511836.069	379046.8089
I_29	Bradford Creek	Bradford	IND_20	1510867.373	379550.386
I_30	Bradford Creek	Bradford	IND_20, IND_23	1509994.957	379727.904
I_31	Bradford Creek	Bradford	IND_11, IND_12, IND_23	1509596.536	379900.3115
I_32	Bradford Creek	Bradford	IND_9, IND_11, IND_ 14, IND_16, IND_17, IND_21, IND_22	1509117.523	379477.0643
I_33	Bradford Creek	Bradford	IND_17	1517312.084	373488.3436
I_34	Bradford Creek	Bradford	IND_22	1514934.837	377678.9501
I_35	Broglan Creek	Broglan	SPR_67	1536134.276	427068.6594
I_36	Broglan Creek	Broglan	SPR_20	1539582.495	423166.2712
I_37	Broglan Creek	Broglan	SPR_7, SPR_9, SPR_11, SPR_12, SPR_18, SPR_25, SPR_26, SPR_31	1537720.429	424863.523
I_38	Broglan Creek	Broglan	SPR_5, SPR_6, SPR_15, SPR_16, SPR_30	1547995.103	415100.3454
I_39	Broglan Creek	Broglan	SPR_21	1542886.488	420831.2463
I_40	Broglan Creek	Broglan	SPR_13	1537794.491	424889.3432
I_41	Broglan Creek	Broglan	SPR_25	1537369.344	425292.4648
I_42	Broglan Creek	Broglan	SPR_4, SPR_8, SPR_10, SPR_14, SPR_22 thru SPR_24, SPR_28, SPR_29	1543097.849	416457.5592
I_43	Broglan Creek	Broglan	SPR_17	1536912.633	426477.0582
I_44	Huntsville Spring Creek	Byrd Spring	SPR_34, SPR_35, SPR_69,	1518221.195	429971.6234
I_45	Huntsville Spring Creek	Byrd Spring	SPR_33, SPR_36	1512296.151	434287.9881

Industrial Major Outfalls
Huntsville MS4

Outfall ID	Creek or River Name	Basin	Facility ID	Northing	Easting
I_46	Flint River	Chase	FLI_3 thru FLI_6, FLI 8 thru FLI_25 and FLI_27 thru FLI_29	1555319.896	448949.1927
I_47	Flint River	Chase	FLI_7	1559532.273	450386.618
I_48	Flint River	Chase	FLI_26	1562487.628	449854.8431
I_49	Flint River	Chase	FLI_19	1563047.793	444757.2552
I_50	Dallas Creek	Dallas	SPR_41	1545649.118	433078.6976
I_51	Dallas Creek	Dallas	SPR_37, SPR_42, SPR_130	1545406.019	431248.1602
I_52	Dallas Creek	Dallas	SPR_37, SPR_42, SPR_130	1545408.015	431254.445
I_53	Dallas Creek	Dallas	SPR_37	1545416.866	431301.2677
I_54	Dallas Creek	Dallas	SPR_40	1544172.298	430252.2308
I_55	Dry	Dry	IND_28	1574484.85	413497.8876
I_56	Dry Creek	Dry	IND_26	1559364.018	405023.7123
I_57	Dry Creek	Dry	IND_27	1548294.67	398411.7334
I_58	Dry Creek	Dry	IND_29	1559980.109	406710.9694
I_59	Fagan Creek	Fagan	SPR_43	1537087.396	432929.1185
I_60	Huntsville Spring Creek	Huntsville Spring	SPR_56, SPR_59, SPR_62, SPR_70, SPR_74	1520252.86	425081.6696
I_61	Huntsville Spring Creek	Huntsville Spring	SPR_48, SPR_54, SPR_68	1525251.894	426670.9883
I_62	Huntsville Spring Creek	Huntsville Spring	SPR_51, SPR_64, SPR_68	1523103.237	425727.8287
I_63	Huntsville Spring Creek	Huntsville Spring	SPR_62	1522780.196	425694.0224
I_64	Huntsville Spring Creek	Huntsville Spring	SPR_63	1531978.182	427454.9417
I_65	Huntsville Spring Creek	Huntsville Spring	SPR_47	1534926.774	427427.072
I_66	Huntsville Spring Creek	Huntsville Spring	SPR_60, SPR_71	1533010.255	426336.6215
I_67	Huntsville Spring Creek	Huntsville Spring	SPR_46, SPR_55, SPR_57, SPR_58, SPR_66	1532130.089	426396.4888
I_68	Huntsville Spring Creek	Huntsville Spring	SPR_44, SPR_45, SPR_52, SPR_75, SPR_150	1529447.59	427028.8661
I_69	Huntsville Spring Creek	Huntsville Spring	SPR_61	1528595.837	426938.5733
I_70	Huntsville Spring Creek	Huntsville Spring	SPR_61	1528203.619	426918.6721
I_71	Huntsville Spring Creek	Huntsville Spring	SPR_65, SPR_72	1528998.566	426918.0806
I_72	Huntsville Spring Creek	Huntsville Spring	SPR_69	1524794.17	428044.3257
I_73	Huntsville Spring Creek	Huntsville Spring	SPR_53, SPR_73	1524918.804	427761.9733
I_74	Huntsville Spring Creek	Huntsville Spring	SPR_44	1530497.555	427346.9173
I_75	Huntsville Spring Creek	Huntsville Spring	SPR_32	1517945.844	425169.7216
I_76	Huntsville Spring Creek	Huntsville Spring	SPR_69	1519737.007	425240.4865
I_77	Huntsville Spring Creek	Huntsville Spring	SPR_49	1530790.387	427440.5021
I_78	Indian Creek	Indian	IND_56	1540120.329	395550.0977
I_79	Indian Creek	Indian	IND_39, IND_57, IND_59	1544655.989	398676.1768
I_80	Indian Creek	Indian	D_30 thru IND_32, IND_34 thru IND_38, IND_41, IND_43, IND_44, IND_47 thru IND_56, IND_62, SPR_	1531673.212	397218.4963
I_81	Indian Creek	Indian	IND_42, IND_58	1526893.924	403446.0153
I_82	Indian Creek	Indian	IND_33	1528599.408	395647.4384
I_83	Indian Creek	Indian	IND_33, IND_46	1528507.29	396055.3457
I_84	Indian Creek	Indian	IND_40, IND_45	1528392.168	394156.6737
I_85	Indian Creek	Indian	IND_4	1527426.205	391061.9502
I_86	Limestone Creek	Limestone	LIM_2, LIM_7, LIM_8	1505780.089	347374.1938
I_87	Limestone Creek	Limestone	LIM_3, LIM_7	1505715.744	348157.5245
I_88	McDonald Creek	McDonald	SPR_27, SPR_85	1537753.373	410390.8761
I_89	McDonald Creek	McDonald	SPR_27	1537603.789	410405.8252
I_90	McDonald Creek	McDonald	SPR_27	1536947.393	410446.1861

Industrial Major Outfalls
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Outfall ID	Creek or River Name	Basin	Facility ID	Northing	Easting
I_91	McDonald Creek	McDonald	SPR_27	1536792.625	410591.2806
I_92	McDonald Creek	McDonald	SPR_27	1536274.822	411123.3199
I_93	McDonald Creek	McDonald	SPR_85, SPR_107	1538532.125	409656.9688
I_94	McDonald Creek	McDonald	SPR_96	1539413.288	409940.4184
I_95	McDonald Creek	McDonald	SPR_98	1539901.883	409575.8974
I_96	McDonald Creek	McDonald	SPR_98	1539483.034	409510.8979
I_97	McDonald Creek	McDonald	SPR_82	1541052.25	409265.0313
I_98	McDonald Creek	McDonald	SPR_82, SPR_105, SPR_106,	1540944.731	409146.6493
I_99	McDonald Creek	McDonald	SPR_82	1541333.75	409262.0939
I_100	McDonald Creek	McDonald	SPR_82	1541493.875	409281.6877
I_101	McDonald Creek	McDonald	SPR_92	1544485.002	407920.4113
I_102	McDonald Creek	McDonald	SPR_79, SPR_92, SPR_109	1543174.624	409718.3171
I_103	McDonald Creek	McDonald	SPR_27	1536460.108	412666.2817
I_104	McDonald Creek	McDonald	SPR_27	1537660.849	412709.8203
I_105	McDonald Creek	McDonald	SPR: 77, 80, 81, 83, 86, 87, 88, 89, 90, 91, 93, 94, 97, 102, 103, 105, 108, 110	1534313	410653.4064
I_106	McDonald Creek	McDonald	SPR_78	1541669.006	409350.1295
I_107	McDonald Creek	McDonald	SPR_96, SPR_99, SPR_104	1539486.325	412640.7739
I_108	McDonald Creek	McDonald	SPR_84, SPR_95, SPR_100, SPR_101	1544326.851	404039.7934
I_109	Huntsville Spring Creek	Merrimac	SPR_76, SPR_111, SPR_117	1533089.875	422743.7504
I_110	Huntsville Spring Creek	Merrimac	SPR_114, SPR_116	1529272.458	425082.646
I_111	Huntsville Spring Creek	Merrimac	SPR_112, SPR_113, SPR_115	1530494.024	423814.9953
I_112	Huntsville Spring Creek	Merrimac	SPR_118	1534035.553	419109.1369
I_113	Miller Creek	Miller	IND_17	1497377.341	371612.4438
I_114	Miller Creek	Miller	IND_17	1496211.306	371536.1376
I_115	Miller Creek	Miller	IND_17	1494983.824	370548.8229
I_116	Miller Creek	Miller	IND_17	1495285.485	370973.1393
I_117	Miller Creek	Miller	IND_17	1498988.173	371668.5864
I_118	Miller Creek	Miller	IND_17, IND_60	1500156.026	372874.6864
I_122	Piney Creek	Piney	LIM_9, LIM_10	1507663.012	336305.9794
I_123	Pinhook	Pinhook	SPR_125	1541843.204	426587.3572
I_119	Pinhook Creek	Normal	SPR_122, SPR_123	1561124.055	433889.4449
I_120	Pinhook Creek	Normal	SPR_39, SPR_120	1555582.516	431706.2003
I_121	Pinhook Creek	Normal	SPR_119	1555362.925	435543.6756
I_124	Pinhook Creek	Pinhook	SPR_126, SPR_128, SPR_131, SPR_132	1539865.414	427346.1828
I_125	Pinhook Creek	Pinhook	SPR_138	1545508.648	428690.4721
I_126	Pinhook Creek	Pinhook	SPR_41, SPR_130, SPR_145, SPR_148	1547443.9	428785.1281
I_127	Pinhook Creek	Pinhook	SPR_133	1543384.996	428349.4865
I_128	Pinhook Creek	Pinhook	SPR_144, SPR_149	1542343.25	427219.1873
I_129	Pinhook Creek	Pinhook	SPR_151	1540917.123	426801.9762
I_130	Pinhook Creek	Pinhook	SPR_136	1551498.426	428772.1596
I_131	Pinhook Creek	Pinhook	SPR_141	1551190.819	428784.9141
I_132	Pinhook Creek	Pinhook	SPR_129	1546892.611	428704.5232
I_133	Pinhook Creek	Pinhook	SPR_124, SPR_135, SPR_137, SPR_139, SPR_142	1545517.746	428653.0345
I_134	Pinhook Creek	Pinhook	SPR_140	1540799.111	426968.8663
I_135	Pinhook Creek	Pinhook	SPR_133	1543566.217	428541.4323

Industrial Major Outfalls
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Outfall ID	Creek or River Name	Basin	Facility ID	Northing	Easting
I_136	Pinhook Creek	Pinhook	SPR_ 125, SPR_143, SPR_144, SPR_147	1542336.875	426275.3129
I_137	Pinhook Creek	Pinhook	SPR_127, SPR_134, SPR_146	1541226.002	428475.232
I_138	Tennessee River	Tennessee River East	ALD_5	1477015.596	444368.444
I_139	Tennessee River	Tennessee River West	ALD_6, ALD_7, ALD_10 thru ALD_14	1487906.058	433920.628
I_140	Huntsville Spring Creek	Huntsville Spring	SPR_57	1532499.33	427316.6628

Industrial Facilities Inventory
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Facility ID	Facility Name	Watershed	Basin
ALD_1	AMERICAN PRECISION PRODUCTS	Aldridge Creek (and Eastern Boundary Canal)	Aldridge
ALD_2	HUNTSVILLE-MADISON COUNTY MARINA & PORT AUTHORITY / DITTO LANDING	Aldridge Creek (and Eastern Boundary Canal)	Aldridge
ALD_3	NORRIS CYLINDER COMPANY	Aldridge Creek (and Eastern Boundary Canal)	Aldridge
ALD_4	RIDGEVIEW INDUSTRIES	Aldridge Creek (and Eastern Boundary Canal)	Aldridge
ALD_5	SAINT GOBAIN GRAINS & POWDERS	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River East
ALD_6	ABACO SYSTEMS, INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_7	CUSTOM CHIP CONNECTIONS, INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_8	GATR TECHNOLOGIES	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_9	HUNTSVILLE AMERICAN CABINETS	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_10	LEE BUILDERS INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_11	PALCO TELECOM SERVICE, INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_12	SCI TECHNOLOGY, INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_13	TABOR MACHINE CO., INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
ALD_14	THEONICS, INC.	Aldridge Creek (and Eastern Boundary Canal)	Tennessee River West
FLI_1	DAVIS FOREIGN AUTO PARTS	Flint River	Beaverdam-Madison
FLI_2	R & D ELECTRONICS, INC.	Flint River	Big Cove
FLI_3	AC, INC.	Flint River	Chase
FLI_4	ADVANCED PRECISION MANUFACTURING, INC.	Flint River	Chase
FLI_5	ALADDIN LIGHT LIFT, INC.	Flint River	Chase
FLI_6	AVAILABLE PLASTICS, INC.	Flint River	Chase
FLI_7	BROWN PRECISION, INC.	Flint River	Chase
FLI_8	BRUDERER MACHINERY, INC.	Flint River	Chase
FLI_9	CHARLOTTE PIPE AND FOUNDRY COMPANY	Flint River	Chase
FLI_10	CHICAGO FLAG & DECORATING COMPANY	Flint River	Chase
FLI_11	FLUIDTROL PROCESS TECHNOLOGIES, INC.	Flint River	Chase
FLI_12	GEORGIA-PACIFIC CORRUGATED, LLC	Flint River	Chase
FLI_13	HART & COOLEY, INC.	Flint River	Chase
FLI_14	ISCO INDUSTRIES, LLC	Flint River	Chase
FLI_15	KOMMERLING USA, INC.	Flint River	Chase
FLI_16	MESKER DOOR, INC.	Flint River	Chase
FLI_17	MITCHELL PLASTICS	Flint River	Chase
FLI_18	NATIONAL COPPER & SMELTING	Flint River	Chase
FLI_19	PAR PHARMACEUTICAL, AN ENDO INTERNATIONAL COMPANY	Flint River	Chase
FLI_20	PLASMA PROCESSES, LLC	Flint River	Chase
FLI_21	PLASTIC FUSION FABRICATORS, INC.	Flint River	Chase
FLI_22	PPG AEROSPACE	Flint River	Chase
FLI_23	SCHWARZE INDUSTRIES, INC.	Flint River	Chase
FLI_24	SCHWARZE INDUSTRIES, INC.	Flint River	Chase
FLI_25	TECHNICOLOR HES	Flint River	Chase
FLI_26	TINMAR, INC.	Flint River	Chase
FLI_27	TRAV-AD SIGNS, INC.	Flint River	Chase
FLI_28	UNITED PLATING, INC.	Flint River	Chase
FLI_29	UNITED PLATING, INC.	Flint River	Chase
IND_1	REMINGTON OUTDOOR COMPANY	Indian Creek	Barren Fork
IND_2	ELECTROFORMED NICKEL, INC.	Indian Creek	Betts Spring
IND_3	MATSU ALABAMA, INC.	Indian Creek	Betts Spring
IND_4	NTS HUNTSVILLE, INC.	Indian Creek	Betts Spring
IND_5	PWG SYSTEMS, INC.	Indian Creek	Betts Spring
IND_6	SCIENCE & ENGINEERING SERVICES, INC.	Indian Creek	Betts Spring
IND_7	VISIONARY ENGINEERING AND SERVICES	Indian Creek	Betts Spring
IND_8	TYCO FIRE PROTECTION PRODUCTS, CPVC DIVISION	Indian Creek	Blackwell Swamp
IND_9	ADEPT TECHNOLOGIES, LLC	Indian Creek	Bradford

Industrial Facilities Inventory
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Facility ID	Facility Name	Watershed	Basin
IND_10	AIRGAS SOUTH	Indian Creek	Bradford
IND_11	ALDRIDGE GRINDING MACHINE CO.	Indian Creek	Bradford
IND_12	ARMSTRONG RELOCATION OF HUNTSVILLE	Indian Creek	Bradford
IND_13	BASF CORPORATION	Indian Creek	Bradford
IND_14	CDS - JOHN BLUE COMPANY	Indian Creek	Bradford
IND_15	COPE PLASTICS and UFP TECHNOLOGIES, INC.	Indian Creek	Bradford
IND_16	FUTABA CORPORATION OF AMERICA	Indian Creek	Bradford
IND_17	HSV/MAD COUNTY AIRPORT AUTHORITY and PORT OF HSV and AMERICAN/DELTA/UNITED AIRLINES	Indian Creek	Bradford
IND_18	INTERNATIONAL PAPER HUNTSVILLE	Indian Creek	Bradford
IND_19	KOHLER COMPANY	Indian Creek	Bradford
IND_20	MULTITRONICS VMI, LLC	Indian Creek	Bradford
IND_21	NAVISTAR BIG BORE DIESEL OF ALABAMA	Indian Creek	Bradford
IND_22	PARFUMS DECOEUR, LTD.	Indian Creek	Bradford
IND_23	SAIC (SCIENCE APPLICATIONS INTERNATIONAL CORPORATION)	Indian Creek	Bradford
IND_24	SAIC (SCIENCE APPLICATIONS INTERNATIONAL CORPORATION) and WESTWIND GROUP, INC.	Indian Creek	Bradford
IND_25	T-H MARINE SUPPLIES, INC.	Indian Creek	Bradford
IND_26	GREEN METALS, INC.	Indian Creek	Dry
IND_27	PINNACLE SOLUTIONS, INC.	Indian Creek	Dry
IND_28	TOYOTA MOTOR MANUFACTURING ALABAMA	Indian Creek	Dry
IND_29	WASTE MANAGEMENT OF HUNTSVILLE, INC.	Indian Creek	Dry
IND_30	ADVANCED OPTICAL SYSTEMS, INC. and FREESCALE SEMICONDUCTOR, INC.	Indian Creek	Indian
IND_31	AEROJET ROCKETDYNE and PRATT & WHITNEY ROCKETDYNE, INC.	Indian Creek	Indian
IND_32	AEROVIRONMENT, INC.	Indian Creek	Indian
IND_33	ATI SPECIALITY ALLOYS AND COMPONENTS (WAH CHANG)	Indian Creek	Indian
IND_34	AVIAGEN, INC.	Indian Creek	Indian
IND_35	AZ TECHNOLOGY, INC.	Indian Creek	Indian
IND_36	BALL AEROSPACE & TECHNOLOGIES CORP.	Indian Creek	Indian
IND_37	BOOZ ALLEN HAMILTON, INC.	Indian Creek	Indian
IND_38	BUILDING PLASTICS, INC.	Indian Creek	Indian
IND_39	CHANDLER/MAY, INC.	Indian Creek	Indian
IND_40	COLEMAN WORLDWIDE MOVING	Indian Creek	Indian
IND_41	DIGIUM, INC.	Indian Creek	Indian
IND_42	DRS TECHNOLOGIES, INC.	Indian Creek	Indian
IND_43	DYNCORP INTERNATIONAL	Indian Creek	Indian
IND_44	HARRIS CORPORATION and ITT INDUSTRIES, INC. – ADVANCED ENGINEERING & SCIENCES	Indian Creek	Indian
IND_45	HEALTH GROUP OF ALABAMA	Indian Creek	Indian
IND_46	KENNAMETAL FIRTH STERLING	Indian Creek	Indian
IND_47	KEYSTONE FOODS, LLC	Indian Creek	Indian
IND_48	L-3 COMMUNICATIONS CORPORATION - HUNTSVILLE OPERATIONS and TECHNOLOGY SERVICE CORPORATION	Indian Creek	Indian
IND_49	LEIDOS	Indian Creek	Indian
IND_50	METTERS INDUSTRIES, INC.	Indian Creek	Indian
IND_51	NORTHROP GRUMMAN CORPORATION	Indian Creek	Indian
IND_52	ORBITAL SCIENCES CORP	Indian Creek	Indian
IND_53	PESA SWITCHING SYSTEMS, INC. and AXOMETRICS, INC.	Indian Creek	Indian
IND_54	RAYTHEON COMPANY	Indian Creek	Indian
IND_55	ROCKWELL COLLINS	Indian Creek	Indian
IND_56	SERINA THERAPEUTICS and SOURCE - CF	Indian Creek	Indian
IND_57	THALES USA DEFENSE & SECURITY, INC.	Indian Creek	Indian
IND_58	THE BOEING COMPANY	Indian Creek	Indian
IND_59	VECTOR AEROSPACE	Indian Creek	Indian
IND_60	THE BOEING COMPANY	Indian Creek	Miller
IND_61	UNIVERSAL LIGHTING TECHNOLOGIES	Indian Creek	Miller

Industrial Facilities Inventory
Huntsville MS4

Facility ID	Facility Name	Watershed	Basin
IND_62	ADTRAN, INC.	Indian Creek	Indian
LIM_1	CAPITAL TRAILWAYS CHARTERS & TOURS	Limestone Creek	Beaverdam-Limestone
LIM_2	CONCURRENT TECHNOLOGIES CORPORATION and PRATT & WHITNEY AUTOMATION	Limestone Creek	Beaverdam-Limestone
LIM_3	DURA COAT PRODUCTS, INC.	Limestone Creek	Beaverdam-Limestone
LIM_4	JIT MILITARY SALES	Limestone Creek	Beaverdam-Limestone
LIM_5	KENNAMETAL FIRTH STERLING	Limestone Creek	Beaverdam-Limestone
LIM_6	SAIA MOTOR FREIGHT	Limestone Creek	Beaverdam-Limestone
LIM_7	CINTAS CORPORATION	Limestone Creek	Limestone
LIM_8	POLARIS INDUSTRIES HUNTSVILLE	Limestone Creek	Limestone
LIM_9	HDT EXPEDITIONARY SYSTEMS, INC.	Limestone Creek	Piney
LIM_10	TELEDYNE BROWN ENGINEERING, PLANT 2	Limestone Creek	Piney
SPR_1	ALABAMA CONCRETE COMPANY, INC.	Spring Branch	Blue Spring
SPR_2	SCIENCE & ENGINEERING SERVICES, LLC	Spring Branch	Blue Spring
SPR_3	APAC-AL, INC. and VULCAN MATERIALS COMPANY and WIREGRASS CONSTRUCTION and HOOVER, INC and SEQUATCHIE	Spring Branch	Blue Spring/Broglan
SPR_4	A WILEY & ASSOCIATES, INC.	Spring Branch	Broglan
SPR_5	ALABAMA TRUCK LINE, INC.	Spring Branch	Broglan
SPR_6	AMERICAN ALLOY FABRICATION, INC.	Spring Branch	Broglan
SPR_7	BEST MACHINE WORKS	Spring Branch	Broglan
SPR_8	BRIAN’S TIRE & SERVICE	Spring Branch	Broglan
SPR_9	COLONIAL GRAPHICS GROUP and PRINT SHACK PRINTING AND COPY CENTER	Spring Branch	Broglan
SPR_10	DIXIE MOVING & STORAGE	Spring Branch	Broglan
SPR_11	ELEIT TECHNOLOGY, INC. and TENNESSEE VALLEY PACKAGING & CONTAINER, LLC	Spring Branch	Broglan
SPR_12	ENGINEERED PLASTICS OF ALABAMA	Spring Branch	Broglan
SPR_13	ENGINEERING & MANUFACTURING SERVICES, INC.	Spring Branch	Broglan
SPR_14	FAST SIGNS	Spring Branch	Broglan
SPR_15	GRAPHIC COLOR	Spring Branch	Broglan
SPR_16	JORDAN LANE AUTO & TRUCK SALVAGE	Spring Branch	Broglan
SPR_17	K & M GLASS COMPANY, INC.	Spring Branch	Broglan
SPR_18	KINNEY INDUSTRIES INC.	Spring Branch	Broglan
SPR_19	LINDA'S PRINTING SERVICES	Spring Branch	Broglan
SPR_20	LMS METAL SALES / L. MILLER & SON, INC. and TENNESSEE VALLEY RECYCLING, LLC, HUNTSVILLE DIVISION	Spring Branch	Broglan
SPR_21	LUCILLE MAUD CORPORATION	Spring Branch	Broglan
SPR_22	OFF THE WALL SCREEN PRINTING	Spring Branch	Broglan
SPR_23	REPUBLIC SERVICES / ALLIED /BFI	Spring Branch	Broglan
SPR_24	ROUSSEAU SPORTING GOODS	Spring Branch	Broglan
SPR_25	SALTY NUT BREWERY	Spring Branch	Broglan
SPR_26	STRAIGHT TO ALE	Spring Branch	Broglan
SPR_27	TELEDYNE BROWN ENGINEERING, INC.	Spring Branch	Broglan
SPR_28	UTILITY SERVICE CORPORATION	Spring Branch	Broglan
SPR_29	WAREHOUSE EQUIPMENT & SUPPLY	Spring Branch	Broglan
SPR_30	WIREGRASS CONSTRUCTION	Spring Branch	Broglan
SPR_31	YELLOWHAMMER BREWING	Spring Branch	Broglan
SPR_32	ALABAMA READY MIX CONCRETE and DCA READY MIX USA	Spring Branch	Byrd Spring
SPR_33	GENERAL STANDARDS CORPORATION	Spring Branch	Byrd Spring
SPR_34	SOUTH CENTRAL RECYCLING	Spring Branch	Byrd Spring
SPR_35	TCI, A DIVISION OF PLANTCML A EADS NORTH AMERICA COMPANY	Spring Branch	Byrd Spring
SPR_36	TWO MEN AND A TRUCK	Spring Branch	Byrd Spring
SPR_37	ADS LLC and BEOWULF CORPORATION	Spring Branch	Dallas
SPR_38	D & J ENTERPRISES	Spring Branch	Dallas
SPR_39	MACHINE CRAFT, INC.	Spring Branch	Dallas
SPR_40	NORTH ALABAMA ENGRAVING & STAMP COMPANY	Spring Branch	Dallas
SPR_41	REDI-TO-SERVE	Spring Branch	Dallas

Industrial Facilities Inventory
Huntsville MS4

Facility ID	Facility Name	Watershed	Basin
SPR_42	UNITED CONNECTIVITY SOLUTIONS, INC.	Spring Branch	Dallas
SPR_43	ALABAMA ORTHOTICS & PROSTHETICS, INC.	Spring Branch	Fagan
SPR_44	ACUMEN TECHNOLOGY and KENTISH TRANSPORTATION, INC.	Spring Branch	Huntsville Spring
SPR_45	ALOG CORPORATION	Spring Branch	Huntsville Spring
SPR_46	ARREL ENTERPRISES, INC	Spring Branch	Huntsville Spring
SPR_47	ARTISTIC MARBLE & TILE, INC.	Spring Branch	Huntsville Spring
SPR_48	B & C INSTRUMENTS, INC.	Spring Branch	Huntsville Spring
SPR_49	BOWMAN'S ENTERPRISES, INC.	Spring Branch	Huntsville Spring
SPR_50	BUSINESS RECORDS MANAGEMENT SERVICES and RECON OUTDOORS	Spring Branch	Huntsville Spring
SPR_51	C & J WELDING, INC.	Spring Branch	Huntsville Spring
SPR_52	CMR (CORRELATED MAGNETICS RESEARCH, LLC)	Spring Branch	Huntsville Spring
SPR_53	CURRIE SYSTEMS, INC.	Spring Branch	Huntsville Spring
SPR_54	ENVIRONMENTAL SYSTEMS CORPORATION OF HUNTSVILLE	Spring Branch	Huntsville Spring
SPR_55	FOURROUX PROSTHETICS, INC.	Spring Branch	Huntsville Spring
SPR_56	GREEN MOUNTAIN SOAP CO., INC.	Spring Branch	Huntsville Spring
SPR_57	HALL COMMUNICATIONS	Spring Branch	Huntsville Spring
SPR_58	INLINE LIGHTING & ELECTRIC SUPPLY	Spring Branch	Huntsville Spring
SPR_59	MCALLISTER TOOL & MACHINE	Spring Branch	Huntsville Spring
SPR_60	MEDTHERM CORPORATION	Spring Branch	Huntsville Spring
SPR_61	MILLER & MILLER	Spring Branch	Huntsville Spring
SPR_62	PARKER HANNIFIN CORPORATION	Spring Branch	Huntsville Spring
SPR_63	PEGGY ANN BAKERY	Spring Branch	Huntsville Spring
SPR_64	PHOENIX (THE HUNTSVILLE REHABILITATION FOUNDATION DBA PHOENIX)	Spring Branch	Huntsville Spring
SPR_65	PROFESSIONAL SECURITY SYSTEMS	Spring Branch	Huntsville Spring
SPR_66	PROZONE WATER PRODUCTS, INC.	Spring Branch	Huntsville Spring
SPR_67	QUALITY QUICK PRINTING, INC.	Spring Branch	Huntsville Spring
SPR_68	SERVICE STEEL, INC.	Spring Branch	Huntsville Spring
SPR_69	SOLID WASTE DISPOSAL AUTHORITY – LANDFILL	Spring Branch	Huntsville Spring
SPR_70	STREAMLINE AUTOMATION, LLC	Spring Branch	Huntsville Spring
SPR_71	SUPERIOR PRINTING CO. OF HUNTSVILLE ALABAMA, INC.	Spring Branch	Huntsville Spring
SPR_72	TESTPRO SYSTEMS, INC.	Spring Branch	Huntsville Spring
SPR_73	THE PRINTER CONNECTION	Spring Branch	Huntsville Spring
SPR_74	THE RECYCLERY	Spring Branch	Huntsville Spring
SPR_75	TINTRONICS INDUSTRIES	Spring Branch	Huntsville Spring
SPR_76	HUNTSVILLE HARDWARE & BUILDING SUPPLY, INC.	Spring Branch	Huntsville Spring and Merrimac
SPR_77	AAL USA, INC. and ORBITAL ATK	Spring Branch	McDonald
SPR_78	AFFORDABLE SIGNS & BANNERS	Spring Branch	McDonald
SPR_79	ALION SCIENCE & TECHNOLOGY	Spring Branch	McDonald
SPR_80	AMTEC CORPORATION	Spring Branch	McDonald
SPR_81	ARANEA SOLUTIONS, INC. and ELBIT SYSTEMS OF AMERICA	Spring Branch	McDonald
SPR_82	ARROW ELECTRONICS, INC. and MOOG, INC. and STRATOLAUNCH SYSTEMS CORPORATION	Spring Branch	McDonald
SPR_83	BARON SERVICES, INC.	Spring Branch	McDonald
SPR_84	BELL HELICOPTER TEXTRON, INC. and GMAS and TEXTRON SYSTEMS UNMANN	Spring Branch	McDonald
SPR_85	BENCHMARK ELECTRONICS, INC.	Spring Branch	McDonald
SPR_86	BUFFALO ROCK COMPANY	Spring Branch	McDonald
SPR_87	CARINA TECHNOLOGY, INC.	Spring Branch	McDonald
SPR_88	DRS TECHNOLOGIES – INFRARED SENSORS & SYSTEMS	Spring Branch	McDonald
SPR_89	DYNETICS, INC.	Spring Branch	McDonald
SPR_90	EMERSON NETWORK POWER AVOCENT	Spring Branch	McDonald
SPR_91	GENERAL DYNAMICS C4 SYSTEMS	Spring Branch	McDonald
SPR_92	GOLDEN RULE PRINTING	Spring Branch	McDonald
SPR_93	HARC – HIGH ALTITUDE RESEARCH CORPORATION	Spring Branch	McDonald

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Facility ID	Facility Name	Watershed	Basin
SPR_94	HAWK ENTERPRISES, LLC and SIKORSKY AIRCRAFT CORPORATION and UTC AEROSPACE SYSTEMS	Spring Branch	McDonald
SPR_95	HUNTSVILLE TRACTOR & EQUIPMENT, INC.	Spring Branch	McDonald
SPR_96	LOCKHEED MARTIN CORPORATION	Spring Branch	McDonald
SPR_97	MACRO INDUSTRIES, INC. and MEASUREMENT SPECIALISTS and NATIONAL SCALE TECHNOLOGY, INC.	Spring Branch	McDonald
SPR_98	MBDA MISSILE SYSTEMS and TITERTEK INSTRUMENTS, INC.	Spring Branch	McDonald
SPR_99	MERCURY SYSTEMS, INC. and MILLENNIUM SYSTEMS SERVICES, INC. and SRCTec	Spring Branch	McDonald
SPR_100	MILLENNIUM ENGINEERING AND INTEGRATION COMPANY	Spring Branch	McDonald
SPR_101	NCI LOGIC ANALYZERS	Spring Branch	McDonald
SPR_102	OPEN BIOSYSTEMS, INC.	Spring Branch	McDonald
SPR_103	SIMTECH (SIMULATION TECHNOLOGIES, INC.)	Spring Branch	McDonald
SPR_104	SSS OPTICAL TECHNOLOGIES, LLC	Spring Branch	McDonald
SPR_105	STEPHEN GOULD OF ALABAMA	Spring Branch	McDonald
SPR_106	TDC ACQUISITION HOLDINGS, INC. / TIME DOMAIN CORPORATION	Spring Branch	McDonald
SPR_107	TOROID CORPORATION	Spring Branch	McDonald
SPR_108	UNITED STATES ARMY SPACE & MISSILE DEFENSE COMMAND	Spring Branch	McDonald
SPR_109	VAACO INDUSTRIES	Spring Branch	McDonald
SPR_111	H. G. PEAKE COMPANY	Spring Branch	Merrimac
SPR_112	ICP PANEL-TEC, INC.	Spring Branch	Merrimac
SPR_113	INTEGRATED LOGISTICS SOLUTIONS, INC.	Spring Branch	Merrimac
SPR_114	INTERCONNECT SYSTEMS CORPORATION	Spring Branch	Merrimac
SPR_115	PIVC, LLC	Spring Branch	Merrimac
SPR_116	SECURITY VAULT, INC.	Spring Branch	Merrimac
SPR_117	SEXTON WELDING SUPPLY	Spring Branch	Merrimac
SPR_118	XCELL PRINTING SERVICE	Spring Branch	Merrimac
SPR_119	AEROSTAR	Spring Branch	Normal
SPR_120	ENVIRONMENTAL DESIGN & CONSTRUCTION	Spring Branch	Normal
SPR_121	M & S MACHINE & FABRICATION, INC.	Spring Branch	Normal
SPR_122	UNITED PARCEL SERVICE	Spring Branch	Normal
SPR_123	VIKING PLASTICS	Spring Branch	Normal
SPR_124	ADVANCED TECHNICAL FINISHING	Spring Branch	Pinhook
SPR_125	ALABAMA BUSINESS FORMS	Spring Branch	Pinhook
SPR_126	AUTO SALVAGE AND SUPPLY COMPANY	Spring Branch	Pinhook
SPR_127	BELOW THE RADAR BREWHOUSE	Spring Branch	Pinhook
SPR_128	C. T. GARVIN FEED & SEED	Spring Branch	Pinhook
SPR_129	COMCAST SERVICE CENTER / XFINITY	Spring Branch	Pinhook
SPR_130	GREEN METAL USA, LLC and WORKPLACE BUSINESS SERVICE	Spring Branch	Pinhook
SPR_131	HUNTSVILLE / MADISON COUNTY RAILROAD AUTHORITY	Spring Branch	Pinhook
SPR_132	HUNTSVILLE GLASS CO, INC.	Spring Branch	Pinhook
SPR_133	J. R. ENTERPRISES	Spring Branch	Pinhook
SPR_134	LAMAR OUTDOOR ADVERTISING, INC.	Spring Branch	Pinhook
SPR_135	MADISON BONDED WAREHOUSE, INC.	Spring Branch	Pinhook
SPR_136	MINUTEMAN PRESS	Spring Branch	Pinhook
SPR_137	NEKTAR THERAPEUTICS	Spring Branch	Pinhook
SPR_138	OPTI-MATRIX	Spring Branch	Pinhook
SPR_139	PIT BULL PRODUCTS, INC.	Spring Branch	Pinhook
SPR_140	PRINTWORX, INC.	Spring Branch	Pinhook
SPR_141	PROFESSIONAL CARRIERS OF THE SOUTH, INC.	Spring Branch	Pinhook
SPR_142	QUALITY GLASS COMPANY	Spring Branch	Pinhook
SPR_143	R. F. THERMOFORM	Spring Branch	Pinhook
SPR_144	RICHARDS LIGHTING	Spring Branch	Pinhook
SPR_145	SMITH ENTERPRISES, INC.	Spring Branch	Pinhook
SPR_146	SYSTEM TECHNOLOGY ASSOCIATES, INC.	Spring Branch	Pinhook

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Facility ID	Facility Name	Watershed	Basin
SPR_147	TALLENT'S UPHOLSTERING & REFINISHING	Spring Branch	Pinhook
SPR_148	THE PINNIX GROUP, INC.	Spring Branch	Pinhook
SPR_149	THE SPENCER COMPANIES	Spring Branch	Pinhook
SPR_150	TOM JEFFREY'S SIGN & BANNER	Spring Branch	Pinhook
SPR_151	WASTE AWAY DUMPSTER SERVICE, LLC	Spring Branch	Pinhook