

**Madison MS4
2018-2019 Annual Report
City of Madison, Alabama
NPDES Permit No. ALS000014**



**City of Madison
100 Hughes Road
Madison, Alabama 35758**

January 31, 2019



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1.0 Introduction

The Annual Report is required by Part IV of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Individual Permit ALS000014 for discharges from the City of Madison municipal separate storm sewer system (Madison MS4).

1.1 Madison MS4 Area

The City of Madison Municipal Separate Storm Sewer System (Madison MS4) is defined as the area within both the city limits and the urbanized area boundary. The Madison MS4 comprises approximately 25.7 square miles (12.20%) of the *Huntsville, Alabama Urbanized Area*. A map outlining the approximate boundary of the Madison MS4 is included in **Appendix A** as Figure 2.

According to the 2010 Census, the City of Madison has a total population of 42,938, approximately 99.75% of which live within the designated urbanized area boundary.

1.2 Hydrologic Units in the MS4 Area

The Tennessee River is the ultimate receiving water for the Madison 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 Watersheds in the MS4 Area

Watershed	10 Digit HUC
Indian Creek	06030002-05
Limestone Creek	06030002-07
Tennessee River-Wheeler Lake	06030002-09



Table 1-3 Subwatersheds in the MS4 Area

Subwatershed	12 Digit HUC	Portion of MS4 in Subwatershed (Sq Mi)	% of MS4 In Subwatershed
Barren Fork Creek	06030002-05-04	17.69	68.64
Beaverdam Creek	06030002-09-05	1.91	7.41
Lower Indian Creek	06030002-05-05	3.99	15.48
Middle Limestone Creek	06030002-07-02	1.44	5.59
Upper Indian Creek	06030002-05-01	0.71	2.76

A map showing the subwatersheds in relation to the Madison MS4 boundary is included as Figure 3 in **Appendix A**.

1.3 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.

The Madison city limits currently encompass portions of two subwatersheds for waterbodies with TMDLs. Limestone Creek north of Highway 72 (segment AL06030002-0703-102) and Indian Creek north of Highway 72 (segment AL06030002-0501-110) are identified as impaired waterbodies. TMDLs were established for both segments in February of 2002.

None of the City's outfalls discharge directly to an impaired waterbody; however, construction sites within the Middle Limestone Creek and Upper Indian Creek watersheds are considered Priority Construction Sites, as defined in Part IV.T.31 of the Alabama Construction General Permit.

A map showing the impaired waterbodies in relation to the Madison city limits is included as Figure 4 in **Appendix A**. A map showing the portions of the City located within the TMDL watersheds is included as Figure 5 in **Appendix A**.

1.4 Annual Report Components

Part IV of the Permit requires that the Madison MS4 submit annual reports to ADEM by January 31 of each year. This annual report covers October 1, 2018 through September 30, 2019 and includes:

1. List of contacts and responsible parties
2. Overall evaluation of the Storm Water Management Program
3. Narrative report and summary tables of all SWMP elements



4. Status of the SWMPP implementation and assessment of controls and water quality changes
5. A summary of inspections and enforcement actions
6. Implementation status of the public education programs
7. A budget analysis for the 2019 fiscal year and the 2020 fiscal year

2.0 Contacts List

Part IV.3.a of the NPDES Permit requires that the City of Madison provide a list of contacts and responsible parties involved in the preparation of the Annual Report. The following personnel were directly responsible for the preparation of the 2018-2019 Annual Report:

Ms. Gina Romine, CFM, QCI

ADEM Compliance Administrator
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Mr. Gary Chynoweth, P.E.

Director of Engineering
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100 Hughes Road
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Questions concerning the 2018-2019 Annual Report should be directed to the ADEM Compliance Administrator.



3.0 Program Evaluation

3.1 Major Findings

None of the waterbodies located within the Madison corporate limits were identified on the 2018 303(d) list. All assessed waterbodies within the City of Madison are in compliance with the water quality standards applicable to their designated use classifications.

The Madison corporate limits currently encompass portions of two subwatersheds for waterbody segments identified on the 2018 303(d) list. Indian Creek was listed in 2018 for impairment due to pathogens (e.coli) between its source and Martin Road (segments AL06030002-0501-110 and AL06030002-0505-102). Approximately 5.65 square miles of the City discharge indirectly to the impaired segments of Indian Creek.

The Madison corporate limits also encompass portions of two subwatersheds for waterbodies with TMDLs. Approximately 1.44 square miles of the City discharge indirectly to Limestone Creek north of Highway 72 (segment AL06030002-0703-102). Approximately 0.71 square miles of the City discharge indirectly to Indian Creek north of Highway 72 (segment AL06030002-0501-100). TMDLs for siltation were established for both the Indian Creek and Limestone Creek segments in February of 2002. The TMDL document identified the primary sources of impairment as row cropping practices and roadways.

The definition of a priority construction site under the Alabama Construction General Permit includes any site that discharges to a waterbody for which a TMDL has been finalized or approved by EPA for turbidity, siltation, or sedimentation. Construction sites located within the watersheds for the impaired segments of Indian Creek and Limestone Creek are considered priority construction sites by ADEM. A map showing the portions of the City located within the priority watersheds is included as Figure 5 in **Appendix A**.

3.2 Major Accomplishments

The City of Madison continued to evolve during the 2018-2019 reporting period to strengthen, organize, and consolidate the Storm Water Management Program.

1. Maintained a Storm Water User Fee

To address funding for the Storm Water Program, the City developed an ordinance to create a Storm Water User Fee, in accordance with state law. The ordinance levies an annual fee of \$0.005 per square foot of commercial space on properties with a Class II land use classification and \$10 on properties with a Class III land use classification. The Madison County Tax Assessor and the Limestone County Revenue Commissioners Office assign the land use classifications.

Ordinance 2014-213 was adopted in October 2014. The City began receiving revenue from the Storm Water User Fee beginning in November 2015. The total revenue from the User Fee for FY2019 was approximately \$301,712.54, and a portion of the revenues collected are credited to ADEM.

2. Storm Water Management Program 5 Year Plan and Detailed Expenditure Summary

The City of Madison established a Storm Water User Fee 5 Year Plan for the anticipated revenue



collections from the Storm Water User Fee. The Plan was established during the 2014-2015 reporting period and was presented to the City Council during the adoption of the Annual Operating Budget. The FY2019 Annual Operating Budget included the adoption of the FY2019 Storm Water User Fee budget and detailed expenditure summary. The City was able to allocate funding for annual reporting requirements, illicit detection and elimination, pollution prevention and good housekeeping for municipal operations, public education on storm water impacts, public involvement initiatives, and water quality improvement projects.

3. Voluntarily tested various waterbodies within the city limits

The City voluntarily tested four (4) waterbodies within the city limits for temperature, pH, ammonia, nitrate, phosphate, total alkalinity, total hardness and dissolved oxygen. These tests were all within range throughout the 2018-2019 reporting period. In August, 2017 the City purchased fifteen (15) Earth Force Low Cost Water Monitoring Kits and one (1) Water Quality Educator and Monitoring Outfit for James Clemens High School in order for students and their teacher to assist the City in testing two (2) waterbodies located at Cambridge and Waterford Subdivisions. The City continued to partner with James Clemons High School to test the two (2) waterbodies during the 2018-2019 reporting period.

4. Increased enforcement at construction sites

Following the adoption of the Erosion and Sediment Control Ordinance in April 2015, the City increased enforcement activity at construction sites within the MS4 boundary. The ordinance requires that copies of the reports of monthly and post-rainfall BMP inspections required by the Alabama Construction General Permit be submitted to the ADEM Compliance Administrator. The City does not approve plans without applicable permits and continues to monitor all active construction projects to determine if the plans in use at each site matched the plans approved by the City.

5. Fifth year of stream-walking program

The City of Madison contracted S&ME, Inc. to conduct stream-walking activities within the City limits between August 2019 and September 2019. 108 outfalls were identified, however 4 were no longer present during the 2018-2019 reporting period and no dry weather flows were observed or screened. No illicit discharges were observed and no samples were collected.

6. Maintained a Storm Water Management Program webpage

During the 2018-2019 reporting period, the City maintained a storm water webpage on the City of Madison website. The webpage includes information on the Storm Water User Fee and includes links to the Individual Phase II NPDES Permit, the proposed 2017 SWMPP, the 2013-2014 Annual Report, the 2014-2015 Annual Report, 2015-2016 Annual Report, 2016-2017 Annual Report, 2017-2018 Annual Report, all storm water related ordinances, a link to the Garner Street Drainage Improvements, the Flood Damage Prevention Ordinance, The USGS Water Cycle, a link to the ADEM website, the Storm Water User Fee 5 Year Plan, the Water Quality Improvement Plan Map, a link to the EPA website, a link to the Solid Waste Disposal Authority website, a link to frequently asked questions and the Let Us Know reporting system.



7. Participated in the 2018 Madison County Drinking Water Festival

The Madison County Drinking Water Festival was held May 8-9, 2019 on the campus of the University of Alabama in Huntsville. The City of Madison was one of the event sponsors, and Ms. Gina Romine, the Madison ADEM Compliance Administrator, served on the Advisory Committee. The mission statement of the festival is "To educate students and their families about how groundwater and surface water, as well as other associated natural resources (i.e. wetlands, forestry, wildlife, etc.), relate to drinking water and to instill in them a general environmental awareness and stewardship ethic." The 2019 festival hosted 17 schools and more than 1,400 fourth graders from four (4) Huntsville City Schools, five (5) Madison County Schools, four (4) Madison City Schools, four (4) private schools and homeschools.

8. Maintained a Hydraulic/Environmental Engineer on staff

During the 2016-2017 reporting period the City of Madison hired Mr. Eduard Morgan, a Hydraulic/Environmental Engineer, to model detention basins within the City of Madison to improve hydraulic and water quality discharge performance. Mr. Morgan began analyzing information to establish floodplains and modifications that may reduce the FEMA-established floodplains. Mr. Morgan remained on staff during the 2018-2019 reporting period and successfully received verification from FEMA on the approval of the LOMR for the Bradford-Sullivan Ditch, also known as the Garner Street Drainage Improvements. During the 2016-2017 reporting period the 2 ponds which were constructed to post development standards contains the 100-year flood within the ponds and the widened stream effected all flood insurance policies and renewals in our community for this area and removed thirty eight (38) residential dwellings and two (2) commercial businesses from the floodplain. During the 2018-2019 reporting period Mr. Morgan received verification from FEMA on the approval of a LOMR for the Mill Creek Tributary #2, he analyzed and began the submittal process of a LOMR for Unnamed Tributary to Betts Springs where over thirty (30) residential homes and commercial properties will be removed from the flood; and he also analyzed and submitted a LOMR for the upper portion of Mill Creek which once approved will remove approximately twenty (20) homes and twenty (20) apartment buildings from the flood.

9. Conducted municipal IDDE training

Fifteen (15) municipal employees participated in the IDDE awareness training conducted on September 25, 2019. The attendees included representatives from the Engineering Department, the Building Department, the Public Works Department, the Police Department, and the Fire Department. The training included background information on the MS4 program, municipal good housekeeping, as well as information on common illicit discharges, how to identify illicit discharges, and where to report suspect discharges. The 2017-2018 municipal training resulted in nineteen (19) spill kits being ordered for municipal vehicles in October, 2017 and twenty-one (21) spill kits being ordered for the Fire Department on September 28, 2018 in order for them to be placed in all Fire Department vehicles other than ladder trucks, which contain larger emergency spill kits. On October 2, 2018 Battalion Chief Steve Perry sent a memo to all Madison Fire/Rescue Personnel that fuel kits were to be placed in each Fire Department vehicle to mitigate fuel spills from the vehicle or an accidental spill while fueling the vehicle. Kits were to be placed in all vehicles during October, 2018.

10. Continued to implement and flood and water quality improvement projects

The City of Madison remained active in flood control and water quality improvement projects. During the 2018-2019 reporting period, the City completed the design of the Oakland Spring Branch Greenway Phase



1 and Phase 2. This Greenway will reduce the number of stream connections to Moore’s Branch diverting them to a separate drainage channel where water will be cleaned before discharge. The design of this project encouraged Creekside Park Subdivision to install two (2) retention ponds which cleans water prior to discharge. Clean Water requirements were included in both Phases and approximately two (2) acres was reserved as a conservation easement and was planted in trees. The City also completed the Hardiman Road drainage project that removed twenty (20) homes from the flood threat which was discovered by a City Flood Study. The City upsized the pipe crossing to alleviate flooding.

Table 3-1 Accumulative Accomplishments Since 2013

Total post development land converted to pre-development hydrology	723 acres
Total new development meeting pre-development hydrology	475 acres
Total area removed from floodplain	120 acres
Total area to revert to wetland conditions	8.30 acres
Total area filtered from floating debris	726 acres

3.3 Overall Program Strengths / Weaknesses

The City of Madison Storm Water Management Program is considerably stronger and more effective following the 2018-2019 reporting period.

The main strength of the storm water program is the implementation of the Storm Water User Fee. With a funding source in place, the City has been able to expand the storm water program and commit to additional initiatives such as the expanded public education and water quality improvements programs. The Storm Water User Fee 5 Year Plan established during the 2015-2016 reporting period is updated annually and details the planned expenditures for the Storm Water User Fee Fund.

The second strength of the program is the City’s continuing commitment to flood control projects. The City of Madison is a rapidly growing community, and the majority of new development is residential. This development is occurring under a planned subdivision process in which flood zones are protected, wetlands are identified and protected, and post-development storm water discharges are controlled to mimic pre-development hydrology, mainly through the use of detention/retention ponds. The City has adopted a new Flood Ordinance that includes restricting development within City established floodplains. This allows for the City to limit development along streams and establishes a larger raparion buffer for the streams. The City is also proactively modifying existing detention structures and constructing new detention structures in post developed areas to reduce storm water peak discharge and convert post developed areas to mimic pre-development hydrology. To date, over one square mile of post developed area has been converted to mimic pre-development hydrology. In June 2018 effective date of November 8, 2018 FEMA approved a Letter of Map Revision (LOMR) for Bradford-Sullivan Ditch for flood management purposes and all flood insurance policies and renewals in our community for this area. These improvements are part of what was also called the Garner Street Drainage Improvements where two (2) ponds were built and a stream was widened. The ponds were constructed to post-development standards



and the 100-year flood is now contained within the ponds and widened stream. This project and LOMR removed thirty-eight (38) residents and two (2) businesses from the floodplain.

A third strength of the program is the increased public education efforts. During the 2018-2019 reporting period, the City maintained a Storm Water Management Program Webpage, sponsored and served on the Advisory Committee for the 2019 Drinking Water Festival, continued to promote the new water quality logo, and distributed over 4,000 promotional items and/or educational materials during the 2018 Madison Street Festival on October 6, 2018. The City also participated in the City of Madison Chamber of Commerce Business Expo and Kid's Day for the fourth time and distributed approximately 500 storm water promotional items during the event held on July 27, 2019. This was the first year that the City participated in Ready Fest held on March 30, 2019.

The main weakness of the Madison storm water program is the small number of municipal staff that are able to be dedicated exclusively to the performance of the duties required by the Individual Phase II Permit. The City currently employs an ADEM Compliance Administrator as the primary executive of the storm water program. The Engineering Department assists with the storm water program responsibilities, including GIS mapping, performing required inspections and assisting with public education efforts; however, the majority of the program duties are handled by one individual. The City does not currently have the ability to expand the Engineering Department for the storm water program; therefore, this weakness is expected to remain through at least the 2019-2020 reporting period.

A secondary weakness of the current program is that the City is still refining their current program and establishing new procedures to meet the requirements of the Individual Phase II Permit. The addition of the Storm Water User Fee Fund has made it possible to expand the City's storm water efforts, and since the issuance of the Individual Phase II Permit, the City is in the process of building new programs, refining existing programs and establishing ordinances in order to achieve compliance with the Individual Phase II Permit. This weakness is expected to resolve over the next reporting period, as the City moves from developing new initiatives to executing well-established programs.

3.4 Future Direction of the Program

During the upcoming reporting period, the City plans to:

- Continue implementation of the revised Storm Water Management Program Plan
- Update and continue implementation of the Storm Water User Fee 5 Year Plan
- Continue development of a City-wide storm drainage plan to identify areas that improve flood management and storm water quality and to guide new development to mimic existing conditions
- Develop a more effective means of tracking enforcement activities
- Develop a post-construction storm water management ordinance
- Submit drainage analysis to FEMA for floodplain map revisions



4.0 Narrative Report

4.1 Storm Water Collection System Operations

4.1.1 *Activities Completed / In Progress*

During the October 1, 2018 to September 30, 2019 reporting period, the City of Madison accomplished or began work on twelve (12) Storm Water Collection System Operations strategies. A summary table identifying each Storm Water Collection System Operations strategy planned for the 2018-2019 reporting period, a description of actions taken by the City of Madison, and a brief description of activities planned for the next reporting period is provided in **Appendix C**. Supporting documentation is included in the attached cd.

Trash Removal

During the reporting period, the City evaluated various methods of direct removal of trash from waterbodies within the MS4. The City will continue to consider partnering with local civic groups to conduct stream cleanup events for direct trash removal from the MS4. Local chapters of the Boy Scouts of America, The Girl Scouts and the citizens group, Just Serve were identified as potential partners, and discussions were held with various troop leaders. Communication will be continued during the 2019-2020 reporting period.

During the 2018-2019 reporting period, the City evaluated and selected BMPs to accomplish the direct removal of trash from ponds, inlets, and/or culverts within the MS4. A trash rack was installed in October 2017 at the Sullivan Street crossing of the Garner Street Drainage Basin and it filters the 440 acre drainage basin from floatables and debris prior to entry into Bradford Creek. Approximately 156 tons of debris were removed from this trash rack during the reporting period. The trash rack installed at Zeirdt Road was temporarily removed for construction, the City plans to replace the trash rack during the 2019-2020 reporting period. The City has also had fabricated a trash rack for a crossing on Walden Road that the City plans to install during the 2019-2020 reporting period. Additional trash removal BMPs will be installed during the 2019-2020 reporting period at other locations within the MS4 with priority given to known flooding locations.

Direct removal of trash prior to entry to the MS4 was accomplished during the reporting period by conducting litter removal in the City-maintained public rights-of-way. Right-of-way litter control activities were performed by the City's landscape contractor, Tidewater Landscaping. Tidewater reported collecting 153 gallons of trash at City Hall and other City facilities and Intergraph voluntarily reported removing approximately 9,156 gallons, one (1) eight (8) yard dumpster and one (1) three (3) yard dumpster of trash from the spillway at their location on Graphics Drive during the reporting period.

The City currently requires common areas of subdivisions (including ponds) to be maintained by the Owner of Record. During the reporting period, the City also met with various Homeowners Associations (HOAs) to discuss potential improvements or changes to existing structural controls to increase functionality. Pollution prevention and maintenance strategies were also discussed.



Trash Prevention

Waste receptacles were maintained in public areas such as City-owned parks, greenways, and the Village Green in downtown Madison. Another method of trash prevention was through enforcement of the existing litter ordinances. Code Enforcement was responsible for violations pertaining to the Nuisance Control and Property Maintenance Code. During the reporting period, forty-five (45) litter enforcement actions were taken.

Trash prevention was also accomplished by increasing inspections of construction sites. During the reporting period, 3,225 construction site inspections were performed by City personnel. The site BMPs, including trash management, were observed during each site inspection.

Event Trash Management

During the reporting period, the City evaluated and selected temporary BMPs to protect catch basins from litter during the 2018 Madison Street Festival. Drain bags were placed prior to the festival date for use during the festival held on October 6, 2018.

Additional trash receptacles were provided by the Parks and Recreation Department for all City managed events. A total of three (3) events were held during the 2018-2019 reporting period and trash removal was performed immediately following the events.

High-Trash Areas

During the reporting period, the City began evaluating potential high-trash areas based on information from Parks and Recreation. Areas considered for designation included greenway trailheads, City parks and other areas generating more public use.

Areas delineated as high-trash areas are Dublin Park, greenways and trailheads, downtown and Palmer Park. The City maintained trash receptacles in the identified areas during the 2018-2019 reporting period.

4.1.2 General Discussion

Although the landscape contractor was previously providing litter collection information to the ADEM Compliance Administrator for inclusion in the Annual Report, the reporting requirements were not included in the City Landscape Maintenance Contract. The City included requirements for the removal of trash and the reporting of trash collection in the Bid Specifications for the City Landscape Maintenance Contract during the 2018-2019 reporting period with the option to extend the Agreement for two (2) additional one (1) year periods, not to exceed three (3) years total.

During the reporting period, the City issued four (4) Special Events Permits, two (2) Parade Permits, and three (3) Race Permits. The event permits required trash management as a condition of the permit, but did not specify that temporary protection of catch basins was required. The City plans to revise the event permits during the 2019-2020 reporting period to include a requirement for temporary protection of catch basins where feasible.



The nine (9) event permits issued during the reporting period required trash management as a condition of the permit, but did not specifically require that event organizers provide trash receptacles. The City plans to revise the event permits during the 2019-2020 reporting period to include the requirement that event organizers provide trash receptacles in the event area.

The event permits also do not currently specify the one-business day timeframe for litter removal. During the revision of the event permits, the City will include the requirement that event trash be removed within one business day of the event.

4.1.3 *Status*

The Storm Water Collection System Operations strategies implemented during the 2018-2019 reporting period are in compliance with Part II.B.1 of the Individual Phase II Permit.

The City revised the Storm Water Management Program to reflect the changes in the Phase II permit during the 2016-2017 reporting period.

4.1.4 *Assessment of Controls*

The controls enacted during the reporting period appear to be effective in meeting the Storm Water Collection System Operations program objectives. The controls are adequate to achieve removal of trash from waterbodies within the urbanized area.

4.1.5 *Proposed Revisions*

Revisions to the current list of Storm Water Collection System Operations strategies were incorporated into the proposed 2017 SWMPP.

4.2 **Public Education and Public Involvement**

4.2.1 *Activities Completed / In Progress*

During the October 1, 2018 to September 30, 2019 reporting period, the City of Madison accomplished or began work on fourteen (14) Public Education and Public Involvement strategies. A summary table identifying each Public Education and Public Involvement strategy planned for the 2018-2019 reporting period, a description of actions taken by the City of Madison, and a brief description of activities planned for the next reporting period is provided in **Appendix D**. Supporting documentation is included in the attached cd.

Public Input

A Storm Water Management Program Webpage was maintained during the 2018-2019 reporting period to distribute information on the Storm Water User Fee and provide access to the Storm Water User Fee 5 Year Plan, the Water Quality Improvement Plan Map, and the most recent Annual Report. The webpage also includes links to the Individual Phase II NPDES Permit, the proposed 2017 SWMPP, the 2013-2014 Annual Report, 2014-2015 Annual Report, 2015-2016 Annual Report, 2016-2017 Annual Report, 2017-2018 Annual Report all storm water related ordinances, the Flood Damage Prevention Ordinance, the Garner Street



Drainage Improvements, a link to the ADEM website, the Water Quality Improvement Plan Map, a link to the EPA website, a link to the Solid Waste Disposal Authority website, a link to the Pride of Madison Program, the USGS Water Cycle and the Let Us Know reporting system. Four hundred forty five (445) hits were recorded on the webpage during the 2018-2019 reporting period. There were four hundred seventy four (474) hits on the webpage during the 2017-2018 reporting period; this is a decrease of 6.1% from the previous reporting period.

By posting the 2017-2018 Annual Report on the Storm Water Management Program Webpage, the City is inviting citizens to review the documents and submit comments. The Annual Reports were made available for public comment and remains on the Storm Water Webpage.

Litter Reduction

During the reporting period, the City evaluated various techniques for marking existing storm drains and identified groups to contact to implement a storm drain marking program. Storm drain markers were purchased during the 2015-2016 reporting period to be placed at inlets. Various civic organizations have been approached regarding the installation of storm drain markers. The storm drain marker image was also added to Government Access Channel 42 on Wow! Cable to inform citizens of the message "Only Rain Down the Storm Drain". During the reporting period two hundred twenty four (224) markers were placed in neighborhoods and other locations throughout the City and located in the City's GIS. During fiscal year 2020 two hundred twelve (212) storm drain markers have been installed so far.

The Madison Beautification and Tree Board currently manages the City's Pride of Madison Program, which includes the Adopt-a-Mile program. During the reporting period The Beautification Board participated in the Chamber of Commerce Expo in July 2019 and provided information on the Adopt-a-Mile program.

The City currently provides for the weekly pickup of yard waste as a measure to prevent the deposition of yard debris in the MS4. The weekly pickup of yard waste was contracted out to Republic Services.

Education on Pollution Reduction

During the reporting period, fifteen (15) items promoting storm water education were developed or prepared for distribution to the public. A brochure rack was installed at City Hall on April 6, 2015 and documents on storm water awareness were placed in the rack and maintained during the 2018-2019 reporting period. Educational materials were also placed at the Madison County Tax Collector's Office, the City of Madison Public Works Complex, the Madison Public Library and within the City of Madison Engineering Department.

The City also continued to promote their storm water awareness logo on promotional materials and handouts. During the 2018-2019 reporting period, approximately 5,500 items including: reusable cotton totes and hand sanitizers were branded with either the logo or stormwater slogan were purchased or distributed during the reporting period. Over 4,000 items branded with the storm water awareness logo were distributed during the 2018 Madison Street Festival held October 6, 2018 in addition to over 1,000 ADEM activity books and crayons. Additional materials were distributed during the Madison Chamber Business Expo and Kid's Day held July 27, 2019, placed at the Madison Public Library and provided for the 2019 Take Your Child to Work Day. The reusable cotton totes were filled with storm water and flood-related educational



materials provided by ADEM, EPA, and FEMA. During August 2018, 2,000 hand sanitizers with the message "Only Rain Down the Storm Drain" and the direct link to the City of Madison storm water webpage were ordered for the October 2018 Street Festival and all 2,000 were handed out. An additional 2,000 hand sanitizers have been ordered for the 2019 events.

The City is currently working to educate engineers, developers, and contractors through plan review and permitting of new construction and development. During the 2018-2019 reporting period, forty-five (45) construction plans were reviewed. The reviews included an assessment of potential storm water impacts and an evaluation of the planned construction and post-construction BMPs.

The 2019 Madison County Drinking Water Festival was held May 8-9, 2019 on the campus of the University of Alabama in Huntsville. The City of Madison was one of the event sponsors, and Ms. Gina Romine, ADEM Compliance Administrator, served on the advisory committee. The 2019 festival hosted more than 1,400 fourth graders from four (4) Huntsville City Schools, five (5) Madison County Schools, four (4) Madison City Schools, four (4) Private Schools and homeschools.

Following the 2019 event, the City committed to supporting the 2020 Madison County Drinking Water Festival, planned for May 2020 as a Silver Sponsor. The ADEM Compliance Administrator will continue to serve on the Festival Advisory Committee.

During the reporting period, the City maintained the fifty-eight (58) existing pet waste stations at City and neighborhood parks.

Public Participation

The Huntsville Solid Waste Disposal Authority (SWDA) currently administers a hazardous waste collection program. During the reporting period, the City promoted the "Handle with Care" program by distributing brochures and providing a link to the SWDA website on the City of Madison Public Works and Storm Water webpages. Collection days were held the first Saturday of every month at the SWDA facility in Huntsville. During the monthly drop-offs, Madison residents were able to properly dispose of household hazardous waste free of charge.

During the reporting period, the City promoted the curbside recycling program administered by the Huntsville SWDA by distributing the "Our World Is In Your Hands! A Citizens Guide to Recycling in Huntsville, Madison & Madison County" brochure and providing a link to the SWDA website on the City of Madison Public Works and Storm water webpages. SWDA was responsible for curbside pickup and disposal of the recyclable materials.

On September 2, 2009, the City's "Let Us Know" program was established. The program consists of a webpage and a hotline for residents to report complaints, including those for illicit discharges. The webpage is linked from the main page of the City website, as well as included on the Storm Water Management Program Webpage. Two (2) complaints were received and either transferred to the appropriate department or resolved.

The Madison Police Department held two (2) drug take back event during the reporting period. The events were held on October 27, 2018 and April 27, 2019 and the Police Department collected approximately 540 pounds of used or expired medications from the two (2) events and the drug collection box located in the



Police Department lobby inside of City Hall.

The Drug Take Back Box is used to collect used, unwanted or expired medications. The Drug Take Back Box discusses keeping pharmaceuticals out of the water system. The Police Department also distributed ADEM activity books during the 2019 Read Around the Block event held annually at Madison Public Library.

Program Evaluation

During the 2018-2019 reporting period, the Public Education and Involvement Program expanded to significantly increase the number of contacts and activities. As a result, the general public has more resources for participation and is more aware of storm water issues within the City.

During the reporting period, the City maintained a Public Education budget for the 2018-2019 reporting period that further expands the public education program. The implementation of the Storm Water User Fee and the associated Storm Water User fee 5 Year Plan and Detailed Expenditure Summary will allow the City to pursue additional public education and involvement initiatives such as the Madison County Drinking Water Festival, Madison Chamber Business Expo and Kid's Day, the Madison Street Festival, the Ready Fest and various other events.

4.2.2 General Discussion

As previously discussed, the City completed several strategies promoting public education and involvement. Educational information was more widely distributed than in past years, and the materials were of higher quality and contained a broader array of topics.

The 2018-2019 reporting period was the fourth year the City targeted the Madison Chamber Business Expo and Kid's Day for promoting storm water awareness. The Business Expo and Kid's Day was also selected because it is a large annual event in Madison that is held in a relatively small area. The attendance during the 2018 Madison Street Festival was estimated at 30,000-40,000. Due to the expected attendance and the location, both the Festival and the Expo provides many more opportunities for contacts than other municipal events such as the 4th of July celebration. During the reporting period, the City prepared and purchased over 5,000 items for distribution at the Festival and the Expo. Some bags were filled with storm water and flood-related educational materials including information on pollution prevention and good housekeeping for residences and businesses. Other items simply promoted the City of Madison Storm Water awareness logo that included a link to the Storm Water webpage where various educational information can be found. The City also gave out ADEM storm water activity books and crayons and the EPA "After the Storm" brochures at the Street Festival and the Business Expo. The 2018 Madison Street Festival was held on October 6, 2018, and the Madison Chamber Business Expo and Kid's Day was held on July 27, 2019, during the 2018-2019 reporting period.

The 2018-2019 reporting period was the fifth year during which the City participated in the Madison County Drinking Water Festival. The Drinking Water Festival provides an opportunity to reach over 1,400 students and partner with other stakeholder organizations.

The City has also spoke with The Boy Scouts, The Girl Scouts and Just Serve regarding the installation of storm drain markers in various areas throughout the City. The City purchased 500 storm drain markers during the 2015-2016 reporting period and another 500 during the 2018-2019 reporting period. During the 2018-2019 reporting



period two hundred twenty four (224) were installed and an additional two hundred and twelve (212) have been installed so far during the first part of the 2019-2020 reporting period. The City will continue to communicate with various groups in order to keep the Storm Drain Marking Program active.

To advance public education on the subject of pet waste, the City is evaluating the addition of educational signage in select areas. The City will consider alternative signage that includes information on pet waste and water pollution for future pet waste station purchases.

4.2.3 Status

The Public Education and Public Involvement strategies implemented during the 2018-2019 reporting period are in compliance with Part II.B.2 of the Individual Phase II Permit.

The City revised the Storm Water Management Program to reflect the changes in the Individual Phase II Permit during the 2016-2017 reporting period.

4.2.4 Assessment of Controls

The controls enacted during the reporting period appear to be effective in meeting the Public Education and Public Involvement program objectives. The controls are adequate to educate the community about the impacts of storm water runoff, identify steps the community can take to help reduce pollutants, and provide opportunities for public involvement.

4.2.5 Proposed Revisions

Revisions to the current list of Public Education and Public Involvement strategies were incorporated into the proposed 2017 SWMPP.

4.3 Illicit Discharge Detection and Elimination

4.3.1 Activities Completed / In Progress

During the October 1, 2018 to September 30, 2019 reporting period, the City of Madison accomplished or began work on fourteen (14) Illicit Discharge Detection and Elimination strategies. A summary table identifying each Illicit Discharge Detection and Elimination strategy planned for the 2018-2019 reporting period, a description of actions taken by the City of Madison, and a brief description of activities planned for the next reporting period is provided in **Appendix E**. Supporting documentation is included in the attached cd.

Legal Authority

An IDDE ordinance was developed during the 2013-2014 reporting period and was finalized during the 2014-2015 reporting period. City of Madison Ordinance Number 2015-037 was adopted on April 14, 2015 to amend Chapter 20 of the Code of Ordinances, City of Madison, Alabama by creating *Article VII. Municipal Separate Storm Sewer System*. The Ordinance prohibits illicit discharges and connections and provides the City with the ability to perform inspections, trace suspected illicit discharges, require elimination of



confirmed illicit discharges, and compel compliance.

Field Assessment Activities

The outfalls identified within the City limits during the 2018-2019 reporting period were added to the City's GIS database. The MS4 map was updated to reflect the additional outfalls, the locations and name of waterbodies within the MS4, and the revised MS4 boundaries.

From August 2019 to September 2019, S&ME, Inc. performed stream-walking activities on waterbodies within the Madison City limits. A total of one hundred eight (108) outfalls were previously identified, however four (4) were no longer present during the stream-walking activities.

The City receives as-built surveys of new developments and field-verifies each development's discharge points prior to acceptance into the City of Madison Maintenance Program.

Dry weather inspections were conducted at the 104 outfalls identified during the reporting period. No dry-weather flows were observed at any of the inspected outfalls.

Illicit Discharge Investigation

None of the 104 outfalls inspected during the reporting period were identified as having an obvious or suspect discharge, and no illicit discharge investigations were performed.

Two (2) illicit discharges were reported to the City during the reporting period and were handled by Public Works, The Madison Police Department and Gina Romine, ADEM Compliance Administrator. One was a report of paint being dumped into the creek on Small Creek Drive. The Madison Police Department responded to the complaint and the complaint was forwarded to the ADEM Compliance Administrator. The ADEM Compliance Administrator inspected the area and did not see any signs of paint. However, the contractor was notified and educated on the IDDE program. The second report was regarding a concrete truck pouring excess concrete down the storm drain at the First Baptist Church on Sullivan Street. Public Works responded to the complaint and the manhole cover was pulled to prove that no concrete was in the storm drain.

One (1) illicit discharge was reported to the City during the 2017-2018 reporting period and still remains open. The report, received March 28, 2018, pertained to dumping and fill of an area known as Wild Hog Swamp. Due to the area being in a wetland the U.S. Army Corps of Engineers (Corps) was notified and took authority over the case. The Corps file number associated with this case is LRN-2018-00245 and David Medina, Regulatory Specialist (Biologist) handled the case. The decision by the Corps would be a voluntary restoration of the immediate area to its original state. The City has been tasked with periodic inspections of the site until it is restored to its natural state by the owner.

Corrective Actions

Two (2) illicit discharges were reported to the City during the reporting period. The report, received April 10, 2019, pertaining to paint in the creek and the other received April 12, 2019 regarding concrete in the storm drain. Both reports were resolved without enforcement action. The report received during the 2017-2018



reporting period is still ongoing and the City is still periodically inspecting the site.

No illicit discharges from adjacent MS4s were identified during the reporting period, and ADEM was not contacted.

Public IDDE Education

On September 2, 2009, the City's "Let Us Know" program was established. The program consists of a webpage and a hotline for residents to report complaints, including those for illicit discharges. The reporting system is linked from the main page of the City website and from the Storm Water Management Program webpage. During the 2018-2019 reporting period, the City maintained the Let Us Know webpage to include a specific category for storm water complaints. The City received two (2) storm water complaints via the Let Us Know system. The complaints were either transferred to other departments or any storm water related issues were addressed.

Municipal Employee Training

IDDE awareness training was conducted on September 25, 2019. Fifteen (15) municipal employees participated, including representatives from the Engineering Department, the Building Department, the Public Works Department, the Fire Department, and the Police Department. The training included background information on the MS4 program, municipal good housekeeping, as well as information on common illicit discharges, how to identify illicit discharges, and where to report suspect discharges.

4.3.2 General Discussion

As previously discussed, stream-walking activities were conducted during the reporting period for waterbodies within the Madison City limits. As a result of the stream-walking effort, 104 outfalls were identified and inspected. None of the inspected outfalls were observed to have dry-weather flows and no samples were collected for laboratory analysis.

4.3.3 Status

The IDDE strategies implemented during the 2018-2019 reporting period are in compliance with Part II.B.3 of the Individual Phase II Permit.

The City has revised the Storm Water Management Program to reflect the changes in the Individual Phase II Permit.

4.3.4 Assessment of Controls

The controls enacted during the reporting period appear to be effective in meeting the IDDE program objectives. The controls are adequate to prevent or correct illicit discharges to the Madison MS4.

4.3.5 Proposed Revisions

Revisions to the current list of IDDE strategies were incorporated into the proposed 2017 SWMPP.



4.4 Construction Site Storm Water Runoff Control

4.4.1 *Activities Completed / In Progress*

During the October 1, 2018 to September 30, 2019 reporting period, the City of Madison accomplished or began work on eleven (11) Construction Site Storm Water Runoff Control strategies. A summary table identifying each Construction Site Storm Water Runoff Control strategy planned for the 2018-2019 reporting period, a description of actions taken by the City of Madison, and a brief description of activities planned for the next reporting period is provided in **Appendix F**. Supporting documentation is included in the attached cd.

Legal Authority

An Erosion and Sediment Control ordinance was developed during the 2013-2014 reporting period and was finalized during the 2014-2015 reporting period. City of Madison Ordinance Number 2015-038 was adopted on April 14, 2015 to amend Chapter 20 of the *Code of Ordinances, City of Madison, Alabama* by creating *Article VIII Erosion and Sediment Control*. The ordinance establishes the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas* as the guidance document for BMPs, provides for inspections of construction sites, and identifies the steps the City may take to enforce the ordinance.

Municipal Employee Training

Personnel tasked with conducting construction BMP inspections during the reporting period included Mr. Darryl Ahonen and Ms. Gina Romine. Mr. Ahonen and Ms. Romine became recertified during the 2018-2019 reporting period to maintain their Qualified Credentialed Inspector (QCI) certifications. The QCI recertification is good for a period of one year. In addition to Mr. Ahonen and Ms. Romine, the City had five (5) additional employees receive Qualified Credentialed Inspector (QCI) recertification during the 2018-2019 reporting period. In April 2017; Ms. Romine also received her NPDES Certified Stormwater Inspector Certification, which is good for a period of five (5) years. In April 2019 four (4) employees attended the Alabama Association of Floodplain Managers Fall Seminar and Ms. Romine also attended the Designing Trees into the Urban Landscape and Integrating Stormwater Management Course offer by GreenBlue Urban. In May 2019, two (2) employees attended the Runoff Control with National Stormwater Calculator Course offered by Auburn University. In July 2019, three (3) employees attended the Erosion and Sediment Control Handbook Course offered by Auburn University.

Site Inspection

The Engineering Department continuously maintains an updated inventory of all active construction sites within the MS4 area to the maximum extent practical. During the 2015-2016 reporting period, the ALR100000 Construction General Permit expired. The City is actively seeking permit information from builders, developers and the ADEM website as the information becomes available.

Construction storm water BMPs were observed at all active construction sites during the reporting period. The observations were performed in conjunction with other routine construction inspections. A total of 3,225 construction site inspections were performed during the reporting period.



Site Plan Review and Approval

Section 20-441 of Chapter 20, Article VIII requires construction sites greater than 10,000 square feet (0.23 acre) in size to provide an Erosion and Sediment Control Plan. During the reporting period, forty-five (45) Erosion and Sediment Control Plans were submitted to the City for review.

Erosion and Sediment Control Plans are reviewed based on the criteria established in the Zoning Ordinance and Subdivision Regulations, as well as the additional criteria established in the Erosion and Sediment Control Ordinance and the adopted Alabama ESC Handbook.

Public Complaints

On September 2, 2009, the City's "Let Us Know" program was established. The program consists of a webpage and a hotline for residents to report complaints, including those for illicit discharges. The webpage is linked from the main page of the City website. During the reporting period, the City updated the Let Us Know webpage to include a specific category for storm water complaints.

The City received two (2) storm water complaints during the reporting period. The complaints were either resolved or transferred to the appropriate department for resolution.

Enforcement Actions and Tracking

Following the adoption of the Erosion and Sediment Control Ordinance in April 2015, the City increased enforcement activity at construction sites within the MS4 boundary. The ordinance also requires that copies of the reports of monthly and post-rainfall BMP inspections required by the Alabama Construction General Permit be submitted to the ADEM Compliance Administrator.

Due to limited staffing, records of the increased enforcement actions were maintained primarily through email. Individual compliance issues noted during BMP observations were typically discussed on-site and formal records of every verbal notification were able to be not maintained.

ADEM Notification

The Individual Phase II Permit requires that the City notify ADEM of unpermitted construction sites; however, the City currently does not allow construction to proceed without an approved ADEM permit. During the reporting period, no stop work orders were issued to qualifying construction sites that were identified as operating without an NPDES permit.

The Erosion and Sediment Control ordinance developed during the 2013-2014 reporting period and finalized during the 2014-2015 reporting period provides the City with the authority to initiate enforcement actions against non-compliant construction sites. No construction sites refused to conform after being notified of impending enforcement actions by the City; therefore, no non-compliant sites were reported to ADEM.



4.4.2 General Discussion

During the 2018-2019 reporting period, observations of construction storm water BMPs were made in conjunction with other routine construction inspections such as pre-construction meetings, general inspections, grading inspections, clearing/ grubbing inspections, utility work inspections, proof rolls, landscape inspections, drainage complaints, and neighborhood paving inspections. The results of the BMP observations are recorded in the same manner as all other construction inspections, unless deficiencies are found, which complicates the record-keeping process. The City implemented a BMP inspection form as part of the 2017 proposed SWPPP to record inspections specific to sediment and erosion BMPs.

The City is also evaluating the development of a complaint tracking form separate from the QAlert system. This would enable the ADEM Compliance Administrator to more easily track enforcement actions specific to construction storm water.

To assist the ADEM Compliance Administrator and the Engineering Inspector with BMP inspections, five (5) additional City employees received QCI recertification training during the reporting period. These five (5) employees will notify the ADEM Compliance Administrator of deficiencies noted during routine building inspections or project inspections. However, due to the limited number of staff to collect the reports, the deficiencies were tracked by email.

4.4.3 Status

The Construction Site Storm Water Runoff strategies implemented during the 2018-2019 reporting period are in compliance with Part II.B.4 of the Individual Phase II Permit.

The City revised the Storm Water Management Program to reflect the changes in the Individual Phase II Permit.

4.4.4 Assessment of Controls

The controls enacted during the reporting period appear to be effective in meeting the Construction Site Storm Water Runoff program objectives. When fully implemented, the controls are adequate to monitor and control pollutants associated with land disturbing activities.

4.4.5 Proposed Revisions

Revisions to the current list of Construction Site Storm Water Runoff strategies were incorporated into the proposed 2017 SWMPP.

4.5 Post-Construction Storm Water Management

4.5.1 Activities Completed / In Progress

During the October 1, 2018 to September 30, 2019 reporting period, the City of Madison accomplished or began work on eleven (11) Post-Construction Storm Water Management strategies. A summary table identifying each Post-Construction Storm Water Management strategy planned for the 2018-2019 reporting period, a description of actions taken by the City of Madison, and a brief description of activities



planned for the next reporting period is provided in **Appendix G**. Supporting documentation is included in the attached cd.

Legal Authority

During the reporting period, the City began the development and implementation of a Post-Construction Storm Water management Program.

The City currently regulates post-construction runoff using the development review process. During the 2014-2015 reporting period, the City implemented the new requirement that a 1.14 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 for new development. The design standards were distributed to contractors, engineers, developers, and other stakeholders on June 23, 2015 in a document titled, *Design Standards: Proposed Stormwater Detention/Retention*.

During the 2014-2015 reporting period, the City adopted the most recent version of the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas* (Alabama ESC Handbook). The City also specifically references the *Low Impact Development Handbook for the State of Alabama* in the draft Design Standards for Proposed Stormwater Detention/Retention, dated June 22, 2015. The City is considering Low Impact Design on Capital Improvements project designs and will be incorporating LID standards in the revised City standard details.

Plan Review and Oversight

The submittal of site development plans is required by the City of Madison Zoning Ordinance, updated in September 5, 2018, and the Subdivision Regulations, dated October 20, 2016. During the reporting period, forty-five (45) site development plans were reviewed by the Technical Review Committee or the Planning Commission.

Chapter 28, Article IV of the City of Madison Code of Ordinances establishes a Technical Review Committee co-chaired by the City Engineer and the Director of Community Development. The Technical Review Committee is empowered to make recommendations to land development applicants on how to correct errors in proposed developments plans, improve the design of proposed developments, and ensure that all requirements of the city's applicable laws and regulations are applied to all proposed land developments for which the Planning Commission is the permitting authority. Plan review criteria are established in the Zoning Ordinance, Subdivision Regulations, Construction Specifications Manual, the Alabama ESC Handbook, and the Design Standards for Proposed Stormwater Detention/Retention.

Inspection of Post-Construction BMPs

During the reporting period, the City maintained an inventory of Post-Construction BMPs within the City limits.

To demonstrate and document that new or newly-modified post-construction BMPs were installed per their approved design specifications, the City conducts final inspections of each BMP. During the reporting



period, new detention ponds were approved at Consolidated Pipe, Madison Public Works Facility, Avid Hotel, Bartlett Mill Subdivision, Parker Hall Subdivision, St. Michael's Church, West Haven, Phase 2 Subdivision, Cedar Cove, Phase 2 Subdivision, 3 Park Preserve Phase 1 Subdivision, Heritage Hills, Phase 1 Subdivision, Eye Care Center, Creekside Park, Phase 2 Subdivision, Eastview Subdivision, Hilton Garden Inn at Town Madison, Triad-Roy Sleep Clinic, Madison Ballroom, Madison Express Carwash, Sherwin Williams Paint Store, Terrame', Windemere Phase 1, Subdivision. The post-construction structural controls that became operational during the reporting period were also inspected. However, some of these post-construction structural controls are not within easements and are the responsibility of the owner to inspect.

To ensure the long-term operation and maintenance of existing post-construction BMPs, the City performs yearly inspections of City-managed BMPs. During the reporting period, inspections were performed on fifty-seven (57) City-owned or maintained ponds to confirm that the post-construction BMPs were functioning as designed.

Long-Term Operation and Maintenance

Part II.B.5.4 of the Individual Phase II Permit states that the City must require adequate long-term operation and maintenance of BMPs. The City updated the Design Standards on October 8, 2019 to include detention requirements for the 100 year storm, as-built inspection requirements as part of final inspection, adopted the NOAA rainfall data chart and required detention on private property to be inspected and the reports sent to the ADEM Compliance Administrator.

Part II.B.5.5 of the Individual Phase II Permit states that the City must maintain or require the developer, owner, or operator to maintain records of post-construction inspections and maintenance activities. During the reporting period, the City maintained records of the post-construction BMP inspections performed. BMPs that were identified as needing maintenance or corrections were sent to the Public Works Department for the necessary corrective actions and all except one were corrected during the reporting period.

4.5.2 General Discussion

The City's existing post-construction storm water management program is largely regulated and enforced under the Zoning Ordinance and Subdivision Regulations. The City developed Design Standards to consolidate and clarify post-construction BMP requirements.

As of the date of this report, the City has implemented a Storm Water User Fee 5 Year Plan and each year details the planned expenditures to retrofit existing structures or begin new projects that will meet the new post-construction criteria. The 5 Year Plan was presented to the City Council during adoption of the FY2019 budget and includes a specific category for water quality improvement projects. An updated Summary of Expenditures was presented to City Council during the adoption of the FY2020 budget process.

4.5.3 Status

The Post-Construction Storm Water Management strategies implemented during the 2018-2019 reporting period are in compliance with Part II.B.5 of the Individual Phase II Permit.



The City revised the Storm Water Management Program to reflect the changes in the Individual Phase II Permit.

4.5.4 *Assessment of Controls*

The controls enacted during the reporting period appear to be effective in meeting the current Post-Construction Storm Water Management program objectives. When fully implemented, the controls are adequate to address post-construction storm water runoff from new development and re-development within the Madison MS4.

4.5.5 *Proposed Revisions*

Revisions to the current list of Post-Construction Storm Water Management strategies were incorporated into the proposed 2017 SWMPP.

4.6 **Pollution Prevention/Good Housekeeping for Municipal Operations**

4.6.1 *Activities Completed / In Progress*

During the October 1, 2018 to September 30, 2019 reporting period, the City of Madison accomplished or began work on nine (9) Municipal Pollution Prevention and Good Housekeeping strategies. A summary table identifying each Municipal Pollution Prevention and Good Housekeeping strategy planned for the 2018-2019 reporting period, a description of actions taken by the City of Madison, and a brief description of activities planned for the next reporting period is provided in **Appendix H**. Supporting documentation is included in the attached cd.

Municipal Facilities

The City maintains an inventory of all municipal facilities, including municipal facilities that have the potential to discharge pollutants via storm water runoff. During the reporting period, all thirteen (13) municipal facilities were identified on the inventory.

Pollution Prevention

To reduce the amount of litter, floatables, and debris entering the MS4 from municipal operations, the City contracted Sweeping Corporation of America to provide street sweeping services following storm events and to sweep 380 lane miles of curb and gutter roads. There was one (1) winter weather events during the 2018-2019 reporting period and material was swept up immediately after the event had ended.

To remove and dispose of litter, floatables, and debris material entering the MS4, the City evaluated and selected BMPs for ponds, inlets, and/or culverts within the MS4. A trash rack was installed in October 2017 at the Sullivan Street crossing of Garner Street drainage basin to filter the entire 440 acre drainage basin prior to entry into Bradford Creek. The Public Works Department is responsible for collection and disposal of the removed waste. Approximately 156 tons of trash and debris was removed from the Sullivan Street trash rack during the reporting period. A trash rack was also previously installed at a crossing on Zeirdt Road. The trash rack had to be removed during the reporting period due to construction. However, plans



to replace the trash rack are in place for the 2019-2020 reporting period.

Standard Operating Procedures

The Individual Phase II Permit requires that the City develop Standard Operating Procedures (SOPs) detailing good housekeeping practices for appropriate municipal facilities or municipal operations. During the previous reporting period, the City identified municipal operations that have the potential to discharge pollutants. The City developed three (3) SOPs during the 2017-2018 reporting period for Materials and Waste Storage (No Oil Based Paint), Vehicle Maintenance and Fueling and Vehicle Wash.

Pesticide, Herbicide, and Fertilizer (PHF) application within the City of Madison is currently performed by the Public Works Department under NPDES General Permit ALG870034. A Pesticide Discharge Management Plan (PDMP) is currently in place and was updated in May of 2017. Standard Operating Procedures for PHF application, storage, disposal, and equipment maintenance are included in the existing PDMP. During the reporting period, the Public Works Department continued to implement the PDMP.

Inspection Program

During the reporting period, all thirteen (13) municipal facilities were inspected for good housekeeping practices. The inspections were recorded on the Site Evaluation Form.

Employee Training

Municipal Pollution Prevention training was conducted on September 25, 2019 and fifteen (15) municipal employees participated in the training. The attendees included representatives from the Engineering Department, the Building Department, the Public Works Department, the Fire Department, and the Police Department. The training included background information on the MS4 program, municipal good housekeeping, spill prevention, fuel storage, used oil management, equipment storage, vehicle washing, and spill clean-up as well as information on common illicit discharges, how to identify illicit discharges, and where to report suspect discharges.

Water Quality Impacts

The City inspected fifty-seven (57) structural controls it maintains. These structural controls are a combination of City constructed flood control projects, developer constructed detention facilities and existing detention or retention ponds that the City is currently designing modifications for future improvements. Future improvements are designed to reduce impacts from the 100 year storm event and at the same time, convert post developed areas to meet pre-development hydrology for the 1.14" 24 hour rainfall. Inspections were made on all fifty-seven (57) structures and maintenance requests were sent to the Public Works Department for corrective action. All of the maintenance requests were completed during the reporting period with the exception of the Pines.

Since 2013, the storm improvement projects completed by the City have had an accumulative effect of converting 723 acres of post development land to pre-development hydrology, reduced the floodplain by an estimated 120 acres, developed 8.30 acres of standing water ponds that will revert to wetland conditions and the City has placed a trash rack over drainage inlet that collects floatable debris from 1166



acres.

4.6.2 *General Discussion*

The municipal facility inspections conducted during the reporting period assisted the City in identifying which facilities have the potential to discharge pollutants. The primary concerns are vehicle washing, materials and waste storage (no oil based paint), and vehicle maintenance and fueling. The City developed SOPs or BMP Plans for the appropriate Departments during the 2016-2017 reporting period.

The street sweeping was implemented during the 2018-2019 reporting period on all residential and collector curb and gutter streets. The street sweeping program was identified in the Summary of Expenditures presented to Council for adoption and all curb and gutter roads were swept after the majority of leaf fall to maximize effectiveness.

4.6.3 *Status*

The Municipal Pollution Prevention and Good Housekeeping strategies implemented during the 2018-2019 reporting period are in compliance with Part II.B.6 of the Individual Phase II Permit.

The City revised the Storm Water Management Program to reflect the changes in the Individual Phase II Permit.

4.6.4 *Assessment of Controls*

The controls enacted during the reporting period appear to be effective in meeting the Municipal Pollution Prevention and Good Housekeeping program objectives. When fully implemented, the controls are adequate to address storm water pollution prevention from municipal operations.

4.6.5 *Proposed Revisions*

Revisions to the current list of Municipal Pollution Prevention and Good Housekeeping strategies were incorporated into the proposed 2017 SWMPP.



5.0 SWMPP Implementation Status and Proposed Changes

The priorities of the Individual Phase II Permit differ from those of the Individual Phase I Permit under which the Madison MS4 previously operated. In particular, the Individual Phase II Permit emphasizes the importance of public education and post-construction BMPs.

During the 2017-2018 reporting period, the City updated the Storm Water Management Program Plan to develop an effective, practicable program for the management of storm water within the Madison MS4.

The City has established a detailed Summary of Expenditures for the 2019 fiscal year that reflects the priorities of the Individual Phase II Permit. The FY2019 budget specifically includes funding for Public Education and Outreach, with outlays for the Madison County Drinking Water Festival, the Madison Street Festival, the Madison Chamber Business Expo, and informational signage. The budget also maintained funding available for water quality improvement projects. The increased budget demonstrates a clear commitment to the successful implementation of the new permit requirements and the 2017 proposed SWMPP.

6.0 Summary of Inspections and Enforcement Actions

6.1 Inspections

- 104 outfalls were identified and inspected during the reporting period.
- None of the outfalls had dry-weather flows.
- 3,225 construction inspections were conducted. BMPs were observed during each construction inspection.
- Fifty-seven (57) post construction BMPs were inspected to determine if they were functioning properly.
- Thirteen (13) municipal facilities were inspected for good housekeeping practices.

6.2 Enforcement Actions

- Forty-five (45) litter enforcement actions were taken.
- No Stop Work Orders were issued to a qualifying construction site operating without appropriate BMPs.



6.3 Corrective Actions

- Two (2) illicit discharges were reported to the City during the reporting period. The report, received April 10, 2019, pertaining to paint in the creek and the other received April 12, 2019 regarding concrete in the storm drain. Both reports were resolved without enforcement action. The report received during the 2017-2018 reporting period is still ongoing and the City is still periodically inspecting the site.

7.0 Public Education Program Implementation Status

During the 2018-2019 reporting period, the City of Madison increased the number of Public Education activities in which the City participated.

The current status of the Public Education Program is as follows:

- The City has maintained a storm water webpage for the purpose of disseminating information on the City's Storm Water Management Program. The webpage provides various information such as access to the Storm Water Management Program Plan, the Storm Water User Fee 5 Year Plan, the Water Quality Improvement Plan Map, Storm Water Ordinances, links to various entities and information as well as previous Annual Reports.
- The City is continuing to educate engineers, contractors, and developers through increased construction storm water enforcement, including audits of active sites by the ADEM Compliance Administrator and the Engineering Inspector.
- The City recently performed storm water outreach at the annual Madison Street Festival for the third time. The 2018 festival was held on October 6, 2018. The ADEM Compliance Administrator and City Engineer distributed over 4,000 items branded with the Madison storm water logo. The City also participated in the Madison Chamber Business Expo and Kid's Day where approximately 500 items were distributed. The City also participated in the Madison Ready Fest.
- The City sponsored the 2019 Madison County Drinking Water Festival. The festival was held May 8-9, 2019 on the campus of the University of Alabama in Huntsville. The ADEM Compliance Administrator also serves on the Festival Advisory Committee.
- The City has expanded the amount of educational material distributed by placing educational and promotional materials at the Madison Public Library. The City also improved the quality of the publications. The City is maintaining the brochure racks installed during the 2015-2016 reporting period by periodically replenishing the educational materials.
- The City is continuing to promote the Adopt-a-Mile program managed by the Madison Beautification and Tree Board.
- The City is continuing to promote the hazardous materials collection and curbside recycling programs managed by the Huntsville Solid Waste Disposal Authority.



8.0 Fiscal Analysis

8.1 Budgets

For the 2019 Fiscal Year, the City of Madison budgeted \$309,000 for the implementation of the storm water program, an increase of \$6,000 over the previous fiscal year.

Table 8-1 FY2019 Storm Water Program Budget

Expenditure	Amount
Annual Reporting Requirements	\$6,000
Illicit Discharge and Detection Elimination	\$50,000
Pollution Prevention/ Good Housekeeping for Municipal Operations	\$132,500
Public Education & Involvement	\$7,000
Water Quality Improvements	\$74,960
County Administration Fees	\$3,090
Department of Revenue / ADEM to Administer Program	\$15,450
Yearly Contingency for Environmental Emergencies	\$20,000
Total FY2016 MS4 Storm Water Budget	\$309,000

As previously discussed, the 2019 Fiscal Year budget includes funding for Public Education and Outreach, with specific outlays for the Madison County Drinking Water Festival, the Madison Street Festival, the Madison Chamber Business Expo, and informational signage. This is the fourth year that public education has been specifically included in the budget.

The FY2020 budget also included additional funding for further ORI activities, stream maintenance, flood studies, a street sweeping program including street sweeping for storm and event cleanup, and water quality improvement projects.



Table 8-2 FY2020 Storm Water Program Budget

Expenditure	Amount
Annual Reporting Requirements	\$6,000
Illicit Discharge and Detection Elimination	\$50,000
Pollution Prevention/ Good Housekeeping for Municipal Operations	\$132,500
Public Education & Involvement	\$7,000
Water Quality Improvements	\$81,540
County Administration Fees	\$3,166
Department of Revenue / ADEM to Administer Program	\$15,830
Yearly Contingency for Environmental Emergencies	\$20,000
Total FY2016 MS4 Storm Water Budget	\$316,036

8.2 Funding Sources

The Madison MS4 Storm Water Program is now funded by the Storm Water User Fee implemented in November 2015. Ordinance 2014-213 was developed during the 2013-2014 reporting period and adopted on October 30, 2014, during the 2015-2016 reporting period. The ordinance created both the Storm Water User Fee structure and the Storm Water Fund. The Storm Water User Fee was established to provide a funding mechanism to aid the City of Madison in meeting the financial obligations imposed by the MS4 Permit, an unfunded mandate. The revenues from the Storm Water User Fee are held in trust and expended in strict accordance with the provisions stipulated in Chapter 89C of Title 11, *Code of Alabama*.

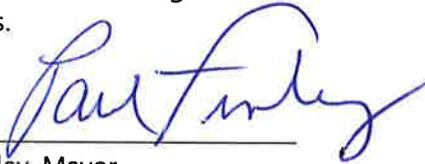
The total expected revenue from the Storm Water User Fee during FY2019 was \$309,000. However, actual revenues received were \$301,712.54. The City began receiving revenue from the Storm Water User Fee in November 2016. The total expected revenue from the Storm Water User fee during FY2020 is \$316,000.

As described previously, the Madison Storm Water Program is a partnership that involves multiple City departments. Other departments, such as Fire, Police, Public Works, Building, and Parks and Recreation, maintains their own budgets and funding sources. The Storm Water Program partners with these departments and includes some routine operations towards compliance with the MS4 permit; however, certain activities directly related to storm water may be funded by the Storm Water Fund in order to maintain compliance with the Individual Phase II Permit to the MEP.



9.0 Agency Certification

I certify under penalty of law that this Annual Report and all attachments pertaining to the City of Madison 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.



Paul Finley, Mayor

1/30/2020
Date