

# **JEFFERSON COUNTY COMMISSION**

***MUNICIPAL SEPARATE STORM SEWER SYSTEM***

***PERMIT NUMBER: ALS000001***

**ANNUAL REPORT FOR REPORTING PERIOD**

**OCTOBER 1, 2017 TO SEPTEMBER 30, 2018**

## **Jefferson County Commission**

Commissioner Jimmie Stephens -President

Commissioner Lashunda Scales-President Pro Tempore

Commissioner Steve Ammons

Commissioner T. Joe Knight

Commissioner Shelia Tyson

Tony Petelos, Chief Executive Officer

Derek C.S. Burr AICP, Director  
Development Services Department

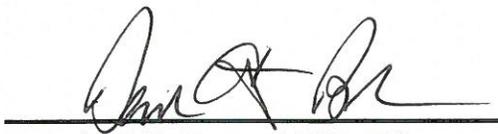




I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information 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 a fine and/or imprisonment for knowing violations (NPDES PERMIT ALS000001, Section VI (B)(4)(H) dated October 12, 2001).

  
\_\_\_\_\_  
Tony Petelos, Chief Executive Officer

12-13-18  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Derek C.S. Burr, AICP, Director

13 Dec 18  
\_\_\_\_\_  
Date

**ANNUAL REPORT - Year Seventeen  
October 1, 2017 to September 30, 2018**

**TABLE OF CONTENTS**

**I. GENERAL INFORMATION**

A. Contacts

**II. PROGRAM EVALUATION**

A. Program Objectives

B. Major Findings

C. Major Accomplishments

D. Program Strength and Weaknesses

E. Future Direction

**III. SUMMARY TABLE**

**IV. PROGRAM MODIFICATIONS**

**V. FISCAL ANALYSIS OF PERMITTEE'S PROGRAM**

**VI. APPENDICES**

A. Stormwater Management Plan

B. Structural Controls; Roadways; Flood Control Projects; PHF

C. New Development and Redevelopment

D. Illicit Discharges; Improper Disposal; Spill Response

E. Industrial and High Risk Runoff Program

F. Construction

G. Education and Public Outreach

H. Monitoring

I. Budgets; Major Findings; MOU

J. Strength and Weakness; Future Direction

# I. General Information

## A. CONTACTS

The staff of the Jefferson County Commission, under the supervision of Tony Petelos, Chief Executive Officer, responsible for all the County Department functions and responsibilities, and Derek C.S. Burr, the Director of the Development Services Department. The staff of the Stormwater Program collected, coordinated information from the various Jefferson County Departments for inclusion, and prepared this 2017-2018 Annual Report.

Any question in reference to this report should be directed to person(s) listed below:

**Derek C.S. Burr, AICP**

Director

**Jeff Gunter, P. E.**

Chief Civil Engineer

**Jefferson County Courthouse  
Development Services Department Room, B-200  
716 Richard Arrington Jr. Blvd. N.  
Birmingham, Alabama 35203  
Telephone: 205-325-5321  
[burrd@jccal.org](mailto:burrd@jccal.org)  
[gunterj@jccal.org](mailto:gunterj@jccal.org)  
<http://jeffonline.jccal.org/>**

## **II. Program Evaluation**

## **A. PROGRAM OBJECTIVES**

The requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit ALS000001, issued by the Alabama Department of Environmental Management (ADEM), list specific responsibilities for the Permittee/Co-Permittees. The Stormwater Program (SP) is responsible for implementing the Storm Water Management Plan (SWMP) within unincorporated Jefferson County, Alabama. The SP stipulates certain obligations that must be met in order for the Permittee to comply with the requirements of the Permit. The SP continued its work in accordance with the latest SWMP that was submitted to ADEM and amended as needed. Work implemented by other County departments which fulfills parts of the MS4 NPDES Permit requirements is reported by the SP in its Annual Report. Please refer to Appendix A for the latest version of the SWMP.

## **B. MAJOR FINDINGS**

During the Permit Year October 1, 2017, through September 30, 2018, the following information was collected and evaluated as major findings that have impacted water quality:

- Jefferson County Commission's NPDES Permit Number ALS000001 was issued with an October 1, 2018 effective date.
- Zhaleh M. McCullers, the prior Interim Director of the newly created Department of Development Services (DDS), retired. Derek C.S. Burr was appointed as the new DDS in September 2018. The Development Services Department which currently has been broken down into four divisions will continue to implement Jefferson County's Stormwater Program. The divisions are Planning, Building, Geographic Information Systems (GIS), and Stormwater. These divisions are responsible for the following permit requirements:
  - Areas of New Development and Significant Redevelopment
  - Flood Control Projects
  - Construction Site Runoff
  - Education and Public Outreach
  - Monitoring Programs

Since the merger, the workflow and communication has been improved between these previously separate Departments. Please see Appendix I for the Organizational Chart.

- As the economy improves, housing starts are increasing, although minimally. Many of the new houses are being built in subdivisions that were dormant during the recession. Although these subdivisions tended to stabilize by natural vegetation, the completed housing sites further stabilized these properties. This minimal development combined with maturing natural vegetation is minimizing the impact on the environment from these previously disturbed areas.
- According to the final 2018 water quality 303(d) list of ADEM and the EPA, 7 stream segments of waterways within, or flowing through, the Jefferson County jurisdiction are designated as impaired by not fully meeting their usage classification. This is a determination reached by ADEM in a federally required biennial evaluation of the status of water bodies within the state. The evaluation is conducted from best available data and a determination of the waterway's ability to support its designated usage classification.

The 5 segments on the 303(d) list in the Black Warrior River basin are typically designated as impaired for chemical impairments as pesticides (Dieldrin), nutrients, pH, and pathogens. Sources of this pollution range from urban runoff and municipal sites to abandoned surface mining operations and collection system failure.

The 2 sites on the 303 (d) list in the Cahaba River basin are designated as impaired for total dissolved solids and metals, in particular, mercury. The sources of the pollutants are industry and atmospheric deposition.

A stream segment of a waterway on the 303(d) list is removed only when it has either: (1) a Total Maximum Daily Load (TMDL) approved by the EPA that allocates the pollutant reductions to the responsible parties, or (2) has improved in water quality as determined by further data. The original stream segments have been reduced to EPA-approved TMDLs within the MS4 area. The finalized, EPA-approved TMDLs\* are:

- Cahaba River for nutrients,
- Shades Creek (including Mud, Mill and Cooley Creeks) for pathogens,
- Shades Creek for siltation, and habitat alterations,
- Village Creek for metals, siltation, and habitat alteration,
- Village Creek (Bayview Lake) for siltation,
- Village Creek for pathogens,
- Camp Branch for pH, siltation, and habitat alteration,
- Locust Fork for nutrients,
- Patton Creek for organic enrichments and dissolved oxygen problems.

Fortunately, data for siltation from habitat alteration in both the Locust Fork and Newfound Creek indicated the impairment no longer exists. ADEM intends to delist these waterways and will not develop a TMDL. As an MS4 entity, Jefferson County concludes the pollutant loading for these parameters has improved by proper Best Management Practices (BMPs), stormwater management plans, and other mechanisms required by the Permit. The current 303(d) List for waters in Jefferson County is included in Appendix I.

\*Due to the complexity of the documented impairments for the above mentioned stream segments, *many have more than a single TMDL for that particular stretch*. In addition, at this time there is no implementation legislation in place for the designated reductions which are allocated to the MS4 in a TMDL. However, the *intent* of the EPA is to have the MS4 jurisdiction over the impaired water body to assume the responsibility for the nonpoint source allocations of the TMDLs in the re-issued Phase I NPDES Permits to be completed by ADEM. That intent has not been finalized by EPA through ADEM at this time.

## **C. MAJOR ACCOMPLISHMENTS**

The following list outlines major accomplishments during the Permit Year October 1, 2017, through September 30, 2018 in accordance with the 11 requirements as outlined in Jefferson County MS4 NPDES Permit:

### **1. Structural Controls**

- a. The County's Roads and Transportation Department (R&TD) maintains the storm sewer system within the unincorporated Jefferson County rights-of-way. During the reporting period, **9,505.24 cubic yards** of material were removed from the storm sewer system. Please see Appendix B.
- b. The Stormwater Program purchased several storm drain concrete stamps, which say **"No Dumping Drains to Waterways."** All new concrete storm drain lids will be imprinted with the stamp and any lids that are in need or scheduled to be replaced. The County's R&TD installed **10 stamped inlet covers** during this Reporting Period. Please see Appendix B.
- c. During the permit year, the Stormwater Program staff, along with other agencies, continued to develop, promote and implement numerous workshops to promote structural controls on individual home sites. Jefferson County Commission formalized several ongoing Memorandums of Understanding with local, state and national agencies with similar goals. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix I.
- d. The Stormwater Program staff continued to use their created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

### **2. Areas of New Development and Significant Redevelopment**

- a. Jefferson County continued using its SmartCode Ordinance as part of its Comprehensive Planning Program during this reporting period. The SmartCode is intended to be used as a voluntary overlay zone to encourage low-impact development (LID) and to concentrate development in more dense clusters that will limit impervious surfaces, reduce the need for automobile travel, and make the use of public transit possible. The Ordinance is intended to address both new development and the re-development of older areas, to increase density in target areas and to reduce the discharge of pollutants into the storm sewer system. This Ordinance was adopted by the County Commission on October 19, 2010. Please see Appendix C.
- b. During Permit Year 2017-2018, **60 subdivision cases** were approved, 52 residential and 8 non-residential. Please see Appendix C.
- c. Jefferson County is located in a region that experiences the impacts of severe weather conditions including tornados, hurricanes, and both drought and heavy rainfall. In order to minimize the discharge of pollutants from these areas, the Stormwater Program staff has identified resources, coordinated efforts, and implemented projects to assist affected communities in replanting trees and other plants to restore the benefits that such vegetation brings, including reducing stormwater runoff, capturing and filtering pollutants, increasing stormwater infiltration, and reducing soil erosion. Jefferson

County continued using its program in effected areas due to severe weather. Below is the list of events that took place during this permit year:

- i. The Centennial Tree Program founded at the Birmingham Botanical Gardens has planted more than 2,500 native trees throughout the Birmingham area since 2009. More than 100 of these trees were planted in North Smithfield Greenleaf Heights, a Jefferson County Community that took a direct hit from the April 2011 tornado outbreak. Efforts to plant **200 small native trees** along the Shades Creek Greenway took place on November 4, 2018 with help of volunteers. Additional plantings are proposed for the next few years. Please see Appendix C.
- d. During Permit Year 2017-2018, **4 public hearings** were held to address changes to the Comprehensive Plan and modify a current development plan. Details of both changes are listed below. Please see Appendix C.
  - i. An update was made to allow for an expansion of the County's industrial park in the McCalla area in the western portion of the county. The original park was developed in the late 1990s and early 2000s to be a high quality light industrial park, and particular emphasis was placed on water quality and sustainability. Storm runoff was handled through a series of ponds and filtered through a constructed wetland. Views of the park from surrounding residential land uses were blocked by landscaped berms, and the park had extensive internal landscaping.

The expansion plan by the County's Economic and Industrial Development Authority called for the size of the park to almost double to include most of the remaining flatter terrain of the area. The Authority plans to maintain the same standards used in the development of the existing park and to retain with minimal disturbance a large natural wetland area on the site.

The Comprehensive Plan for the area called for residential suburban development rather than industrial development. A public involvement process and a Plan Amendment would be necessary for the expansion. The Planning and Zoning Commission (P&ZC) called for the Authority to host two open house events in the area. The first was to inform the public about the plans for the Park and to obtain comments and concerns about the possible expansion. The second open house was an opportunity for the Authority to address concerns brought up previously and to take additional comments. County staff and some P&ZC members participated in the meetings and approximately **140 people** attended overall, with additional comments coming via the County website and through email.

At the meetings, a number of issues were raised concerning traffic, site runoff, historical structures and sites on the property, and views of the park. The Authority addressed these concerns with suggested covenants to guide the development and use of the property. The P&ZC then held its Public Hearing on the Plan, with modifications intended to ensure the future viability of the area, adopted the amendment. The P&ZC then recommended to the Jefferson County Commission the zoning for the property be changed to allow light industrial development with covenants to address issues, including water quality, historic sites, traffic, and the protection of surrounding land uses.

- ii. A minor change was adopted by the P&ZC in the Chalkville area. A developer requested to expand an area designated for commercial development into an area designated for single-family development. A Public Hearing was held where concerns about traffic and adverse impacts on surrounding properties were expressed, and the P&ZC initially declined to modify the Plan. After extensive meetings with the surrounding property owners, the developer presented a plan that would provide significant buffers to protect surrounding properties and to protect a steep slope drainage area with existing wetlands. After another public hearing the P&ZC adopted the plan amendment with a zoning recommendation of covenants to enforce the conditions of the plan. It was reported that at least **60 members of the public** participated in public hearings and meetings on this amendment.
- e. The Stormwater Program staff continued to use their education materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

### 3. Roadways

- a. The County's R&TD deicing program was implemented by Camp Bessemer and Camp Ketona. A total of **252.4 tons** of sand was applied during this reporting period for ice control on County roadways. Please see Appendix B.
- b. The County's R&TD maintains the County's roadways. During this reporting period, **206 bags** and **418 tons** of trash was collected from along Jefferson County roadways. Please see Appendix B.
- c. During this reporting period, **5 fulltime employees** in the County's R&TD picked up litter along roadways in unincorporated areas of Jefferson County and were assisted by state inmate crews. Please see Appendix B.
- d. The Jefferson County Litter Squad Program was implemented by the Jefferson County Court System. The court assigns probationers to community service picking up litter from alongside a designated one mile stretch of roadway. In past reporting years, this program was implemented in conjunction with Jefferson County departments, which provided training, materials, record keeping, and removal of collected trash bags. The Jefferson County Court and its staff coordinate the probationers, assigning them to assist with specific roadside cleanup events that are spearheaded by various organizations and/ or communities. During this reporting year, **966 probationers** were assigned by the Court to pick up litter from along **106.6 miles of roadways**. A total of **1,684 45-gallon bags of litter and trash** were removed from roadways by the probationers. Litter and trash removed from unincorporated Jefferson County roadways is included in the County's R&TD yearly tonnage report under material removed from ditches. Please see Appendix B.
- e. Stormwater Program staff developed a partnership with People Against a Littered State (PALS) promoting and coordinating various community based roadside litter cleanups in Jefferson County including the 2018 "**Don't Drop it On Alabama**" statewide Spring Cleanup. PALS reports over 380 tons of litter was collected statewide. Please see Appendix B.

- i. In Jefferson County, **40 roadside cleanups** were held resulting in **975 volunteers** spending over **3,900 hours** picking up **29.233 tons** of litter along **144.75 linear miles** of roadways and out of ditches. Of those totals, **27 cleanups** were held in unincorporated areas of Jefferson County resulting in **460 volunteers** spending **1,840 hours** picking up **19.103 tons** of litter along **103.25 linear miles** of roadways and out of ditches which was disposed of by the County's R&TD. The amount of material collected is contained in the County's R&TD yearly tonnage report under material debris removed from ditches. Please see Appendix B.
- ii. Jefferson County was recognized at the Alabama PALS Governor's Awards Program which was held on November 8, 2017 for its outstanding commitment in the areas of local cleanup efforts, environmental education and volunteerism. Jefferson County R&TD, Jefferson County Stormwater Program, Jefferson County Sheriff's Office, Mary and Corey Garrett with the Morris Community, Jerri Anderson and Diane Goggins with the Providence Community, Rock Mountain Lakes Homeowners Association, Minor High School, Minor Middle School, and Oak Grove High School Student Government Association all received awards in their respective categories. These achievements were featured in the Alabama PALS Winter Quarter 2018 newsletter, *The PALS Prints Volume 38*. Please see Appendix B.
- iii. On January 11, 2018, the Jefferson County Commission presented Resolutions to the PALS Community Award winners from Jefferson County. Please see Appendix B.
- iv. A presentation on the Jefferson County Volunteer Roadside Cleanup Campaign was made to the Jefferson County Commissioners during the Committee Meeting work session held on Wednesday, February 21, 2018. It included a summary of all the events that took place during the FY 2017. See Appendix B.
- v. The Alabama PALS Summer Quarter 2018 newsletter, *The PALS Prints Volume 38*, featured roadside cleanups held throughout Jefferson County this past spring. Please see Appendix B.
- f. Stormwater Program staff developed partnerships with various agencies specifically targeting the removal of trash and debris from waterways. In Jefferson County, **39 cleanups** were held resulting in **1,552 volunteers** spending over **6,208 hours** picking up **86.914 tons** of litter along **156.25 linear miles** of roadways of litter along creek banks, bridge abutments, nearby roadways and ditches and out of the creeks themselves. Of those totals, **12 cleanups** were held in unincorporated areas of Jefferson County resulting in **902 volunteers** spending **3,608 hours** picking up **57,024 tons** of litter which was disposed of by the County's R&TD or other partnering agencies. The amount of material collected is contained in the County's R&TD yearly tonnage report under material debris removed from ditches. Please see Appendix B.
- i. The **Turkey Creek Nature Preserve (TCNP)** led **15 cleanups** resulting in **250 volunteers** picking up and removing **30 tons** of debris from their property, Turkey Creek and surrounding roads. The Jefferson County Commission and the TCNP work together under an ongoing formalized Memorandum of Understanding to reduce water quality pollution along roadways. There also were several local

schools and service organization volunteers participating in the events. Please see Appendix B and I.

- ii. In conjunction with the Renew Our Rivers Program, trash and debris were removed from the **Warrior River during the Bankhead Lake Cleanup held on May 19, 2018**. As part of this event, a community wide cleanup was also promoted to have local residents pick up trash and debris along roadsides and in sloughs from May 6 until May 12, 2018. It was reported that **35 volunteers** removed approximately **7 tons** of debris. The items collected during this event were placed in an onsite dumpster and hauled away with normal trash pickup. Please see Appendix B.
- iii. In conjunction with the Renew Our Rivers Program, a total of 11 cleanups were held along **Valley Creek**. The volunteer lead cleanups were held on **March 10, 2018 and March 17, 2018** with one prior municipal work day to remove the heavier items on March 15, 2018. These cleanups focused on public awareness and trash removal throughout the Valley Creek Watershed. The cleanups were coordinated by the municipalities throughout the watershed, various agencies, and a coalition of local citizens and businesses. There were **10 volunteer site registration locations** for the volunteers this year. A total of **479 volunteers** removed **15.165 tons** of debris and **1.1 tons** of tires. An education outreach effort aimed at new car drivers, *Litter Quitters*, was included as part of the Valley Creek Cleanup. *Litter Quitters* was an abatement / prevention video competition that was held among public high schools in the Valley Creek Watershed. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix B.
- iv. A total of **7 cleanups** were held along Village Creek resulting in **566 volunteers** removing **29.35 tons** of debris and tires. All cleanups were held in partnership with the Village Creek Human and Environmental Justice Society, City of Birmingham, and Jefferson County Commission. Items collected were removed by the City of Birmingham Public Works Department or the County's R&TD. The County provided funding and materials for all the cleanup events listed below from a Community Grant issued to Village Creek Environmental And Human Justice Society. Details from each event is listed below.

On January 15, 2018, as part of the Hands on Birmingham Martin Luther King Jr. Day of Service Litter Cleanup Project, **358 people** came together and removed a total of **8.5 tons** of material. The items collected were picked up and disposed of by the City of Adamsville and the County's R&TD. This project consisted of 18 hosting / supporting organizations, 4 volunteer registration locations (Minor High School, Docena, McDonald Chapel and Edgewater B), 4 communities (Adamsville, Docena, McDonald Chapel and Edgewater B), 2 municipalities (City of Adamsville, City of Birmingham and Jefferson County Commission) and 2 local schools (Minor High School, Minor Middle School) came together to pick up litter along roadways and ditches in the Village Creek Watershed. This project was coordinated by a working committee with representatives from Adamsville-Forestdale Lions club, Hands on Birmingham, Jefferson County Commission, Jefferson County Department of Health Watershed Protection Program, Minor Middle School, Minor High School and the Village Creek Human and Environmental Justice Society. Volunteer resources and materials were provided by various organizations. Please see Appendix B.

On April 7, 2018, 21 volunteers removed **2.76 tons** of debris and tires. Please see Appendix B.

The March 24 event was in partnership with the University of Alabama Birmingham (UAB), Village Creek Human and Environmental Justice Society, Jefferson County Commission, Jefferson County Department of Health Watershed Protection Program, Unincorporated communities of Mulga Mines and Minor Heights and the Town of Mulga. This project consisted of 1 volunteer registration location, 2 communities (Minor Heights and Town of Mulga), and 3 jurisdictions (City of Birmingham, Town of Mulga and Jefferson County) coming together to pick up litter along Mulga Loop Road and ditches along Village Creek. UAB students along with volunteers from neighboring communities participated in a cleanup along Mulga Loop Road as part of UAB's *Into the Streets* program whose mission is to encourage partnerships that improve education, health, economic prosperity and quality of life through service at home and around the globe. A total of **98 volunteers** removed **3.12 tons** of material from along Mulga Loop Road. The County's R&TD picked up and removed the items that were collected. Please see Appendix B.

On May 19, 2018, 52 volunteers from local schools removed **1.90 tons** of debris during the spring cleanup which was organized by the Village Creek Human and Environmental Justice Society in partnership with the City of Birmingham, Jefferson County Commission and the local schools. Please see Appendix B.

As part of the *Renew Our Rivers* Program, the Village Creek Fall Cleanup was held on September 13-15, 2018. **135 volunteers** along with the Birmingham Fire and Rescue Service, Vulcan Materials Company, City of Birmingham and Jefferson County Commission participated in a cleanup in Village Creek conducted by the Village Creek Society and the Alabama Power Company on September 13-14, 2018. As part of this event, a community wide cleanup was also promoted to have local residents pick up trash and debris along roadsides on September 15, 2018. A total of **135 volunteers** from the local community, various schools and supporting partners removed **19.19 tons** of debris and trash. Please see Appendix B.

- v. A total of **4 cleanups** took place along the Cahaba River. Reports show that **61 volunteers** removed **2.67 tons** of trash and tires. Details from each event is listed below.

A river cleanup was held at the Grants Mill Cahaba Landing and Irondale River Walk on April 28, 2018 as part of the AL PALS Spring Cleanup. This event was spearheaded by the Cahaba River Society and staff from Coke United. A total of **18 volunteers** removed **0.195 tons** of trash and recyclables from along creek banks and out of the river. Plastic bottles and metal cans were recycled, the other material was placed in trash for curbside pickup. Please see Appendix B.

Church of the Highlands, located along Grants Mill Road, spearheaded 3 roadsides cleanups as a means to prevent litter and trash from entering the Cahaba River. One of the events was part of their of their Annual *Day of Service* project, the other two were a part of an outreach group that does various projects in the neighboring communities. All items collected during these cleanups were placed in the Church's dumpsters. On March 24, **10 volunteers** picked up litter, no tonnage was

reported. On July 15, 30 volunteers picked up **2.48 tons** of trash and tires and September 1, 3 volunteers picked up **0.12 tons** of trash. Please see Appendix B.

- vi. A total of **2 creek cleanups** were held along Shades Creek during this reporting period resulting in a total of **86 volunteers** removing **0.52 tons** of debris and tires. Details from each event are listed below. Please see Appendix B.

On June 2, 2018, as a part of Schaeffer Eye Center's community give back day, 21 volunteers removed **0.02 tons** of trash from the banks of Shades Creek. Please see Appendix B.

On September 29, 2018, 65 volunteers removed **4.125 tons** of trash and tires during the 20<sup>th</sup> Annual Shades Creek Cleanup. Jefferson County Stormwater Program provided the trash bags, gloves and backpacks for this event. Please see Appendix B.

- g. The Stormwater Program staff used its created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

#### **4. Flood Control Projects**

- a. During this Permit year, **21 Floodplain Development Permits** were completed and **0 Floodplain Violations** were issued. Please see Appendix B.
- b. The Stormwater Program staff continued to use the created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

#### **5. Pesticides, Herbicides and Fertilizer (PHF) Application**

- a. Camp Ketona of the County's R&TD applied herbicides on **6,046 acres** of land by using **945 gallons of Hard Ball, 0 gallons of Milestone, 1,512 gallons of Target, 47 gallons of Inlet, and 47 gallons of Ground Zero**. Please see Appendix B.
- b. Camp Bessemer of the County's R&TD applied herbicides on **3,905 acres** of land by using **532 gallons of Hard Ball, 532 gallons of RoundUp, 154 gallons of Milestone, 489 gallons of MSMA, and 489 gallons of 2-4-D**. Please see Appendix B.
- c. The County has **13 staff** members who are certified PHF applicators and hold a certified PHF license. Please see Appendix B.
- d. Camp Ketona of the County's R&TD has **2 secure locations** for the storage of pesticides, herbicides and fertilizers. The first storage area is a 40' x 20' structure attached to the warehouse which has a concrete floor and walls, heating and air conditioning, a ventilation fan, and both a walk-in door and bay door that are locked at all times with a 24 hour guard. The second storage location is a 10' x 10' area in the downstairs of the Bridge Division which is kept locked and secured.
- e. The County's General Services Department followed their Standard Operating Procedures (SOPs) which were enhanced in the 2011-2012 Reporting Period for pesticides, herbicides and fertilizers, including: disposal, hygiene, symptoms of

- poisoning, mixing and loading, and recognition and management. Please see Appendix B.
- f. The Operation Center in the Grounds Area of General Services stores its chemicals in a secure location inside an OSHA approved chemical storage room and OSHA approved containers. For a list of materials and amounts, please see Appendix B.
  - g. The County's General Services Department applied **130 gallons of RoundUp**. No fungicide or fertilizer was applied for the 2017-2018 reporting period. Please see Appendix B.
  - h. In February 2018, **25 Jefferson County employees** from **5** departments attended the Chemical Spill Response Training. Those in attendance include staff from General Services, Environmental Services (ESD), DDS, R&TD, and Fleet Management Division. The 8-hr course meets OSHA, EPA, and DOT training standards. It is used for Continuing Education by ADEM for water and wastewater operators, and is approved by the Department of Agriculture and Industries for pesticide applicators. It also satisfies the annual refresher requirement for other Hazmat Training. Please see Appendix B.
  - i. Local governments are prohibited from passing ordinances regulating pesticides by the State Code of Alabama, Section 2-27-5.1. The Alabama Department of Agriculture and Industries is the state agency charged with enforcing laws relating to landscaping and pest management. Anyone continually dealing with pesticides, herbicides, and/or fertilizers must be licensed by the State of Alabama Department of Agriculture and Industries Pesticide Management Section. Anyone applying pesticides, installing plants or designing landscapes for a fee or those applying restricted use pesticides for the production of an agricultural commodity on their own property or on the property of another person with whom they trade services must pass a certification exam and maintain the license to legally operate in Alabama. Please refer to Major Accomplishments, Industrial High Risk Runoff (II.C.8) and see Appendix B and E.

During the 2011-2012 Permit Year, Jefferson County Commission formalized an ongoing Memorandum of Understanding (MOU) with the Alabama Green Industry Training Center (AGITC) through the Alabama Cooperative Extension System (ACES). This year AGITC promoted or held **12 events** regarding proper use of pesticides, herbicides and fertilizers as well as runoff reduction. The AGITC is a local agency that has been recognized by the Alabama Department of Agriculture and Industries and the ACES as a provider of workshops, training and testing to fulfill state regulations which identify individuals who are required to obtain state certification and permits. Please see Appendix B and I.

- j. The **Green Industry Web (GIW) Portal**, hosted by Auburn University at Montgomery (<http://www.giwportal.org>) is a free web based service for the Green Industry to help improve the educational and credentialing efforts of the industry by supplying high quality archived videos, vignettes, PowerPoint presentations and hands-on training throughout the state. This year GIW Portal promoted and/or held **66 events** regarding proper use of pesticides, herbicides and fertilizers as well as runoff reduction. The GIW Portal is a partnership with funding from the Appalachian Regional Commission, Alabama State Department of Education, the Daniel Foundation of Alabama, the Alabama Nursery and Landscape Association, the Alabama Cooperative

- Extension System, the Alabama Department of Agriculture and Industries, the Alabama Green Industry Training Center and many more. During the 2011-2012 Permit Year, Jefferson County Commission formalized an ongoing Memorandum of Understanding with the Alabama Green Industry Training Center (AGITC) through the Alabama Cooperative Extension System (ACES), both partners of the GIW. Please see Appendix B and I.
- k. The Alabama Cooperative Extension System (ACES) published the Alabama IPM Communicator, a comprehensive statewide pest management newsletter for farmers, foresters, retailers, gardeners, and homeowners. The newsletter contains articles from research and Extension personnel from all educational institutions in Alabama. Articles are published as blog and PDF formats. The main purpose of the newsletter is to provide readers information about critical crop production and pest management information as well as promote upcoming workshops, events, and webinars that pertain to proper use and alternatives to chemicals, such as beneficial insects. All past issues of the newsletter are available for viewing at the [aces.edu](http://www.aces.edu/agriculture/insects-diseases-weeds-pests/IPMCommunicator/) website (<http://www.aces.edu/agriculture/insects-diseases-weeds-pests/IPMCommunicator/>). Stormwater Program staff promoted the free publication at events, community based meetings and the Lunch and Learn seminars. During the 2011-2012 Permit Year, Jefferson County Commission formalized an ongoing MOU with ACES. Please see Appendix B and I.
  - l. Initiatives were implemented to have a positive effect on the amount of applied pesticides and fertilizers. EPA launched the new “Bee Advisory Box” located on pesticide labels in an effort to protect pollinators. Stormwater Program staff continued promoting the EPA initiative of pesticide labels at various venues. Workshops and presentations about the proper use of and alternatives to chemicals were held locally and articles were published in local newspapers. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix B.
  - m. Stormwater Program staff continued an Integrated Pest Management (IPM) program to responsibly control mosquitos and other bugs called *Step Away From The Spray!* For publicly owned lands, *Bacillus thuringiensis israelensis* (Bti) tablets and a handout with information about responsible pesticide use, and information on local resources that offer alternatives to yard chemicals, were provided to County departments for their management of these pests. A more expansive IPM program was initiated to address the proper use and application of pesticides on privately owned lands. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix B.
  - n. The Stormwater Program staff continued using the created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

## 6. Illicit Discharges and Improper Disposal

- a. The County’s ESD continued administering a program to address sanitary sewer overflows. To assist in minimizing the occurrence of sanitary sewer overflows, the sewer pipes are cleaned on a routine maintenance schedule. Once the Department is aware of a sanitary sewer overflow, staff is dispatched to investigate and correct the problem as stipulated in the July 2012 Sanitary Sewer Overflow and Response and

Reporting Program Standard Operating Procedure. A list of sanitary sewer overflow locations, including actions taken by the staff, is included in Appendix D.

- b. The ESD administers a county-wide household cooking oil and grease recycling program to reduce the amount of cooking oil that enters the sanitary sewer system, thereby reducing sanitary sewer overflows. This is a free service to all of the citizens of Jefferson County. Collection bins are located at many sites around the county with free plastic containers for residents to take home. Once a container is filled, it can be returned to the collection bin and exchanged for a clean container. The containers are collected weekly by the Grease Control Program inspectors and the oil is picked up at the Shades Valley Wastewater Treatment Plant by local rendering companies. Grease and oil accumulate in the sewer system and require diligent maintenance to prevent sanitary sewer overflows. ESD developed this program in the ongoing effort to prevent overflows and protect the water resources. The bins were constructed by the County's General Services shop and are 4' wide by 4' tall and 2' deep and sit on legs 6" off the ground. The bins sit in a hard, durable plastic tray which provides a liquid retention barrier should a container leak or spill. There are currently **21 drop-off points** that accept filled containers for recycling, which reflects the addition of one new site since last year. A total of **3,694 gallons** was collected between October 1, 2017, and September 30, 2018.

The County's ESD distributed over **5,500 flyers** within apartment complexes, made **21 presentations**, provided **bilingual program materials** that were both displayed throughout the complexes and distributed to residents and held one media conference the week of Thanksgiving. In addition, a form letter for residents as a reminder of the Household Cooking Oil and Grease Recycling Program was made available to the apartment complexes' management. Apartment complexes that are visited due to multiple sanitary sewer overflows are targeted. These letters are posted in common areas of the complex as well as included in the Move-In Package for the apartments.

The Stormwater Program staff promotes this program and distributes materials, containers and scrapers at various events. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and Appendix D.

- c. The Jefferson County Commission continued using a 24 hour hotline for the public to call and report illegal dumping and trash issues (205-582-6555) which was promoted by the news and social media, in various written publications, and at the Jefferson County Commission website. The social media paid advertising, which was targeting men and woman between the ages of 21 and 65 living in a defined area of Jefferson County, resulted in reaching 16,180 people. Of that total, 481 people replied to the posts. The hotline calls, along with calls from the Sheriff's Office deputies on patrol, initiate investigations into the source and subsequent removal of the dumped materials. During this Permit Year, **162 criminal littering complaints** were opened and a number of individuals have been prosecuted for illegal littering and or dumping. Please see Appendix D.
- d. Stormwater Program staff have worked closely with ESD along with the City of Birmingham to find and remove illicit discharges that have been discovered in Valley Creek Watershed since 2015. The City is identifying the source of the illicit discharge. The County's ESD provided the City with the maps of the sanitary sewer

and offered assistance the City with the lab analysis on samples that were taken by the City staff. Please see Appendix D.

- e. A Household Hazardous Waste Collection Day was held on April 21, 2018. The City of Bessemer, Jefferson County Commission, and the Town of Sylvan Springs partnered to provide a Household Hazardous Waste Collection Day for residents of Bessemer, unincorporated Jefferson County, and Sylvan Springs on Saturday, April 21, 2018 at the Bessemer Public Works facility on 15th Avenue North. Approximately 60 vehicles representing **76 households** participated in the event. The following items were collected at the event: 0.6 tons of latex paint; 2 tons of flammable paints; 0.25 tons of aerosols; 0.1 tons pounds of fertilizers; 0.15 tons of cleaners; 2.1 tons of electronics and 0.224 tons of batteries along with miscellaneous hazardous items such as fire extinguishers and smoke doctors. Other items were collected but the vendor did not provide a final report. These items include motor oil, vehicle fluids, tires, and used cooking oil. In an effort to include neighboring municipalities, a speaking presentation was made to the Western Jefferson County Mayor's Association on Friday January 12, 2018 inviting them to financially participate for a fee based upon a factor of \$1.50 a household. Educational brochures on illicit discharges and proper vehicle maintenance were distributed to all vehicles and an intake survey was administered. Please see Appendix D.
- f. A combined total of **3.989 tons of electronics and 0.197 tons of batteries** were collected from 2 Electronic and Battery Takeback Day events held for residents in the unincorporated areas of Jefferson County. Reports show that **97 households** participated in these events which were sponsored by the Alabama Environmental Council (AEC) in partnership with the Jefferson County Commission and neighboring cities. These events were held in areas prone to illegal dumping as a way to proactively deal with the improper disposal of electronics and batteries. Details from each event are listed below. Please see Appendix D.

On June 28, 2018 an event was held at the Adamsville Walmart Parking lot. A total of **22 households** participated in the event. Additional partners with this event include the City of Birmingham, City of Graysville and Keep Birmingham Beautiful. A total of **0.902 tons** of electronics and **0.0765 tons** of batteries were collected.

On August 11, 2018 an event was held at the Jefferson County Center Point Satellite Courthouse. A total of **75 households** participated in the event. Additional partners with this event include the City of Birmingham, City of Center Point, City of Pinson, and Keep Birmingham Beautiful. A total of **3.087 tons** of electronics and **0.1205 tons** of batteries were collected.

- g. To promote proper disposal of various household items, the Jefferson County Commission partnered with AEC on its recycling program, **Recycle Alabama**. The Stormwater Program staff promotes Recycle Alabama through its Jefferson County Clean Water Awareness Campaign posters, newsletters, presentations and events. The AEC runs a nonprofit recycling center in downtown Birmingham which accepts textiles, plastics, glass, metal, cardboard, paper and other items. AEC created and promotes Recycle Alabama through its website ([www.recycAL.org](http://www.recycAL.org)) and printed materials. Under the Recycle Alabama campaign, AEC in partnership with Jefferson County Department of Health, the University of Alabama at Birmingham, Jefferson

County Commission and several municipalities organized the purchase and distribution of recycling drop-off trailers. There were **10 trailers** distributed to various outlying communities in Jefferson County that do not have recycling opportunities. The recycling trailers have a modified version of the ***Trash Blows! Tarp and Tie Your Load*** poster prominently displayed to remind those dropping off materials that even recycled materials can become litter that can pollute our waterways. This past April, the AEC moved the downtown recycling center to a new location just outside the downtown area that would allow more room to expand the items they collect such as glass. During this reporting period AEC collected over **37.38 tons of plastic, 304.69 tons of paper, 148.98 tons of cardboard, 138 tons of glass, 12.291 tons of electronics, 1.234 tons of batteries, and 38.46 tons of metals**. Jefferson County Commission has a formal partnership through an ongoing MOU with the AEC and its recycling campaign known as Recycle Alabama in an effort to reduce expenses by sharing knowledge and resources, minimizing duplication of effort, and enhancing the efficiency of stormwater pollution prevention outreach efforts. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix D and I.

- h. Stormwater Program staff promoted **2 National Prescription Drug Take-Back Events** held in the Jefferson County area on **October 28, 2017** and **April 28, 2018**. These events are designed to promote safe and proper disposal of unwanted or expired medications, and to prevent drugs from being flushed down toilets and ending up in waterways. Over **456 tons** of medication were collected nationwide during these events according to the Drug Enforcement Administration. Materials to promote this program were available in both English and Spanish and in various formats (posters, handouts, etc.). The Drug Enforcement Administration (DEA) published its Notice of Proposed Rulemaking for the Disposal of Controlled Substances in the Federal Register Dec 21, 2012. The proposed regulations seek to implement the Secure and Responsible Drug Disposal Act of 2010. Please see Appendix D.
- i. As an ongoing effort to promote the proper disposal of cigarette butts, the Stormwater Program in partnership with Keep Birmingham Beautiful Commission (KBBC) and City Action Partnership (CAP) created a sticker which was placed on **59 cigarette receptacles**. Please see Appendix D.
- j. A phone hotline was established so that citizens can report suspected water pollution. The **hotline number (205.325.5792)** is publicized on all printed materials (Clean Water Awareness Campaign posters, calendar, backpacks, brochures and flyers) and at the Stormwater Program web site which is located at the County's website <http://www.jccal.org/Default.asp?ID=1112&pg=StormWater>. The pollution reporting hotline contains a recorded message for those citizens calling after normal business hours. The message instructs the caller to leave enough detailed information so staff can investigate the complaint. The hotline received **16 calls** during this reporting period. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix D.
- k. The Stormwater Program staff continued using the created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

## 7. Spill Prevention and Response

For Permit Year 2017-2018, Jefferson County Emergency Management Agency (EMA) had the responsibility for spill prevention and response, and responded to **50 events**. There are **6 Hazmat** units in Jefferson County that are within the fire departments of various jurisdictions. These units along with EMA respond to the various hazardous material incidents for all of the jurisdictions within Jefferson County.

EMA distributes an informational *Kids Wheel on ... Common Household Products* that lists the proper care, usage and disposal of many common household chemical products that include: paint, arts and craft products, pest products, cleaners, and batteries. These wheels are distributed at various public education events throughout the year. Please see Appendix D.

## 8. Industrial and High Risk Runoff

- a. Jefferson County has implemented programs to address the food service and the pesticide, herbicide, and fertilizer vendors.
  - i. Jefferson County ESD continued implementing a Grease Control Program in an effort to eliminate sanitary sewer overflows caused as a direct result of fats, oils and grease from food service facilities\*. The purpose of this program is to decrease the amount of grease discharged into the sanitary sewer system and thereby reduce the number of dry weather sanitary sewer overflows.

\*A food service facility means restaurants, coffee shops, cafeterias, short order cafes, luncheonettes, taverns, lunchrooms, places which manufacture retail sandwiches, soda fountains, institutional cafeterias, catering establishments, and similar facilities by whatever name called.

A Grease Control Ordinance, adopted in 2006, requires every food service facility to obtain a Food Service Facility Grease Control Program Permit. Permits, which are not transferable, are written authorization to discharge to the County's wastewater collection system and are assigned to the owner of the food service facility. All facilities are subject to inspection and monitoring. Other Permit conditions include annual renewals, maintenance and compliance, retention of records, implementation of best management practices, training for employees, and proper disposal. Training DVDs and Best Management Practice (BMP) posters are provided to each permitted food service facility. The Grease Control Ordinance also requires all grease haulers to be licensed by the Jefferson County Department of Health and hold a Septic Tank Haulers Permit. Failure to comply with the Grease Control Ordinance will result in fines and/or termination of the right to discharge to the Jefferson County sanitary sewer system.

Information about the Grease Control Program, including how to apply for a permit, can be obtained from the County's ESD or downloaded from Jefferson County's website. Some of the materials are available in Spanish. (<http://www.jeffcoes.org/Default.asp?ID=26&pg=Customer+Care>).

During this reporting period, **2,407 food service facilities** were permitted, and **2,145 annual site inspections** to food service facilities were made. The annual site inspection includes training food service facility employees on BMP's, supplying these employees with a training DVD, and ensuring the facility has the current BMP

poster displayed in the sink area. Replacement BMP posters are made available if needed. A total of **113 food service facilities** were found to be non-compliant with their permits. The violations include expired or no permit, failure of the 25% rule (exceeding discharge limit), no paperwork on file for training or manifesting, failure to pay permits costs and/or fees, and failure to execute an action plan to address a non-compliant issue. Jefferson County trained **8 employees** (program staff and inspectors) and offer training classes for food service facility employees to attend on a quarterly basis. Please see Appendix D.

- ii. As set forth in the Alabama Pesticides Act, Title 2, Chapter 27 the Commissioner of Agriculture and Industries of the State of Alabama administers and enforces all pesticide regulations. The Pesticide Management Section regulates individuals or companies that sell, use, or supervise the use of restricted-use pesticides, engage in the commercial application of pesticides, and structural pest control or horticultural activities as described in the Agriculture and Industries Chapter 28, Title 2, Code of Alabama, 1975, and the Agricultural Chemistry Administrative Codes 80-1-13, 80-1-14, 80-5-1 and 80-10-9. Under Section 2-27-5.1 of the Alabama Code, local governments are prohibited from passing ordinances regulating pesticides. To comply with the County's MS4 NPDES Permit and Alabama Law, the Jefferson County Commission formalized an ongoing partnership with agencies through a MOU to comply with this Permit requirement. Please see Appendix B, E and I.
- b. The Fleet Management Division (FMD) of the County's R&TD implements a recycling program. For the Permit Year 2017-2018, the FMD properly disposed of **698 batteries, 24,660 pounds** of scrap metal, and recycled **25,432 quarts** of oil. Please see Appendix E.
- c. Jefferson County owns three landfills that are operated by Santek Waste Services. During the 2012-2013 Permit Year, the Turkey Creek Landfill (ALG160139) closed the active cell and the facility operates as a drop-off location, similar to the Johns Transfer Station. To date, there is only **1 active** landfill site within unincorporated Jefferson County which is in Mount Olive located at 101 Barber Parkway, Gardendale, AL 35071 (ALG 890326). Stormwater program staff conducted inspections of the facilities to identify and control pollutants from industrial and high risk runoff sites. The sites were in compliance at the time of inspection, and the completed inspection forms are included in Appendix E.
- d. A pollution prevention video training module series entitled "Preventing Storm Water Pollution: What We Can Do" is available for various Department staff to utilize in training County employees on stormwater pollution prevention. The six video series includes: Introduction – What We Can Do; Construction Activities and Land Disturbances; Fleet Maintenance and Material Handling; Streets and Drainage Maintenance; Parks and Grounds Maintenance; and Solid Waste Management. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).
- e. The Fire Departments within Jefferson County are notified when an industrial site receives a shipment of hazardous material. The Departments make site inspections at these sites in order to familiarize themselves with the location of the material in the event of a spill or fire. The departments will instruct the host facility in the event that the material is not stored correctly and will continue with periodic site visits.

- f. The County's R&TD implemented **2 NPDES industrial permits** issued by ADEM to the County. Please see Appendix B.
- g. The Stormwater Program staff continued using the created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

## 9. Construction Site Runoff

- a. Jefferson County's Subdivision and Construction Regulations, Article 13 Erosion and Sedimentation Ordinance requires all land disturbing activities to obtain permits or an exclusion as part of the zoning process. The County's DDS reviews plans, issues Land Disturbing Activity Permits (or exclusions), and inspects sites for compliance for commercial, industrial, and residential sites. Once staff determines the site to be stable, as specified in the plans, a Certificate of Occupancy is issued and the permit is closed. During this reporting period, established SOPs were followed for the permitting, reviewing and inspection components of the Ordinance.

During the Permit Year 2017-2018, the County's DDS staff issued Land Disturbance Activity Permits for **289 residential single family homes** as part of its zoning approval process. A total of **88 exclusions for single family homes** which were exempt from Land Disturbance Permit requirements were issued. In addition, a total of **20 commercial** Land Disturbance Activity Permits and **15 commercial exclusions** were issued. Land Disturbance Activity Permits were issued to **4 government** construction projects.

A total of **870 erosion and sediment control inspection activities** were performed for the above permitted sites during the Permit Year 2017-2018. Complaints associated with permitted sites are handled through site inspections. Please see Appendix F.

- b. The County's DDS staff distributed materials to inform applicants of the process and requirements of Jefferson County's Subdivision and Construction Regulations, Article 13 Erosion and Sedimentation Ordinance, Land Disturbing Activity Permit. Please see Appendix F.
- c. The County's Development Services Department issued **1,777 zoning approvals** and received complaints related to weed and litter, criminal littering, and zoning violations. During this reporting period, **577 notices of violation** were investigated. Please see Appendix B.
- d. The County's Development Services Department had **9 staff** complete the Qualified Credentialed Inspector (QCI) training for erosion and sedimentation control offered by the Home Builders Association of Alabama (HBAA). The course is a collaborative effort between the HBAA and ADEM and is offered several times throughout the year. Staff attended the QCI training on November 2, 2017, which included tools and strategies to help achieve and maintain compliance with the Storm Water Permit on all construction sites, including linear and roadway construction. Please see Appendix F.
- e. Jefferson County has **17 inspectors, supervisors and staff** that carry a current Qualified Credentialed Inspector certification. Please see Appendix B and Appedix F.

- f. The County’s Stormwater Program assumes responsibility for hosting and coordinating an Erosion and Sedimentation Control (ESC) workshop on an alternating basis with the Jefferson County Department of Health, the City of Birmingham, and the City of Bessemer. Staff entered into a partnership with the Homebuilders Association of Alabama (HBAA) to provide its ESC workshops and maintain a database of attendees. A total of **35 people** attended the **HBAA ESC Workshop** on April 26, 2017. The purpose of these workshops was to provide appropriate education and training measures for construction site operators and municipal staff as required in ALS000001 and to reduce the impact of erosion and sedimentation in waterways. Educational materials were distributed at the workshops. Completion of the workshop allows an individual building a single family home to use this certification in lieu of posting the \$3,000.00 per acre surety required to ensure site stabilization. The *Field Guide for Erosion and Sediment Control on Construction Sites in Alabama* is distributed to attendees of the Erosion and Sediment Control Workshops for single family homebuilders. *Field Guides* in Spanish are available and will be distributed to Spanish speaking attendees as needed. Please see Appendix F.
- g. The County’s R&TD currently implements **6 NPDES permits** issued by ADEM to the County. Please see Appendix F.
- h. The Stormwater Program staff continued using the created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

## 10. Education and Public Outreach

Education and public outreach is a Permit requirement and also is used as a delivery tool that aids in implementing the other Permit requirements. A summary graph has been created to identify every Permit requirement that the following education initiatives, listed alphabetically, addressed. The graph has been included at the end of the Summary Table (III).

### a. Alabama Water Watch Chemical Workshops

Stormwater Program staff coordinated and conducted **2 Alabama Water Trainings on March 21, 2018 and August 15, 2018** (Basic Water Chemistry; Chemistry Recertification; Bacteria Certification; Bacteria Recertification) to **certify 7 and recertify 2 volunteer citizen monitors**. These community volunteers become stewards of the watershed and act as liaisons who will teach their friends, neighbors and community leaders the importance of reducing stormwater pollution. This program trains volunteers to use standardized equipment and techniques to gather credible water information using quality assurance protocols and to use that data for environmental education, waterbody restoration and protection and watershed stewardship. Volunteers may also identify problems by analyzing data and taking action steps to resolve water quality problems. Please see Appendix G.

### b. Boards, Committees, Stakeholder Group

Stormwater Program staff participate in and/or serve on **12 various boards, committees and stakeholder groups** in an effort to evaluate needs, identify potential resources, and coordinate efforts with the goal of addressing concerns through projects,

events, campaigns, and/or educational materials. The Stormwater Program staff worked with the following entities during Permit Year 2017-2018: Alabama Partners for Clean Air, Alabama Stormwater Association, Birmingham Botanical Garden Brown Bag Lunch and Learn Committee, Birmingham Metropolitan Planning Organization (MPO) Policy Committee, Health Action Partnership Environmental Quality Committee, Household Hazardous Waste Day Committee, Jefferson County Water Festival Committee, Martin Luther King Service Day Project Committee, Mulga Loop Road Cleanup Committee, *Litter Quitters* Litter Abatement Video Competition Committee, Rain Barrel Workshop Committee, Valley Creek Cleanup Committee, Village Creek Human and Environmental Justice Society, and Village Creek Watershed Group. Please see Appendix G.

c. **Brochures and Flyers**

The Stormwater Program staff distributed various brochures and flyers to inform and educate the public about stormwater runoff, and to provide helpful tips and resources to improve water quality. These **7 brochures** and **7 flyers** are displayed at the County's DDS two front counters in brochure holders.

The brochures are: **Identifying and Reporting Water Pollution** (illicit connection, illicit discharges, illegal dumping, public reporting); **Lawn & Garden Products, Yard Waste** (fertilizer, pesticide, herbicide, illegal dumping); **Preventing Stormwater Polluted Runoff** (used oil, fertilizer, pesticide, herbicide, illegal dumping, household hazardous waste, public reporting); **Vehicle & Equipment Care & Maintenance** (motor oil); **Let's Look at Sediment** (issues resulting from erosion and sedimentation and offers preventative measures); **Rain Rain Come Our Way** (rain barrel project) and **Fat Free Sewers**. Four of the brochures (Vehicle & Equipment Care & Maintenance; Identifying and Reporting Water Pollution; Lawn & Garden Products, Yard Waste; and Preventing Stormwater Polluted Runoff) include the education website address and the hotline number for public reporting as well as a "what you can do" list of behaviors to reduce polluted runoff.

The flyers are: **It's Your "Doody"** (dog waste), **Jefferson County Cooking Oil and Grease Recycling Locations**, **Erosion and Sedimentation Control Best Management Practices** (outlines BMP requirement for Article 13), **Major Development Checklist** (includes erosion and sedimentation control requirements), **Mobile Homes** (includes erosion and sedimentation control requirements), **Commercial Construction** (includes erosion and sedimentation control requirements), and **New Residences** (includes erosion and sedimentation control requirements).

Please refer to Major Accomplishments, Pesticides, Illicit Discharges and Improper Disposal (II.C.6), Major Accomplishments, Construction (II.C.9) and see Appendix G.

d. **Brown Bag Lunch and Learn Seminars**

Stormwater Program staff, in partnership with the Friends of the Birmingham Botanical Garden, Alabama Cooperative Extension System, Alabama Green Industry Training Center, and the City of Birmingham, created a series of **free informational seminars** called *The Brown Bag Series*, **14** of which were **held during this reporting period**. The seminars were held at the Birmingham Botanical Gardens; were open to all residents of Jefferson County; were promoted in the **JeffCo H2O** Newsletters, blogs

and partner's websites; and flyers were distributed at community events and meetings. Instructors from varying organizations were chosen for each topic. The topics, intended to be of practical application to homeowners, included the stormwater benefits to low impact landscape designs, proper planting and gardening techniques, and prudent use of fertilizers and pesticides. There were **497 participants** during this reporting period. The topics were: "**Shop the Fall Plant Sale**", October 11; "**Pre-Shop the Spring Plant Sale**", April 4; "**All the Dirt on Chert**", April 28; "**Creating a successful Organic Veggie Garden**", May 2; "**Invasive Plants**", May 16; "**DIY Landscape Planning Design With Water in Mind**", May 30; "**Repel and Trap Pests**", June 13; "**Everything I Plant Dies!**", June 27; "**Snip, Cut, Whack**", July 18; "**Keep Out Home Invaders**", August 1; "**Should you say NO to GMO?**", August 15; "**Handbook of Nature Study**", August 29; "**Grain to Glass**", September 12; and "**What's Bugging You**", September 26. Please see Appendix G.

e. **Calendar**

A 12 month printed 2018 calendar was created in partnership with the City of Birmingham to provide a cost effective way to educate the citizens of Jefferson County about watersheds and their impact on local water quality. Each month the calendar highlights a venue with a photo as well as a description of its unique features and attractions. The venues were chosen based on their contributions to reducing pollution in stormwater runoff and improving water quality in local creeks and streams through their preservation, conservation, restoration and education initiatives. The calendar was designed to encourage residents to visit the featured locations and experience the unique ways in which each venue portrays our County's past, shapes our future and contributes to their quality of life. In addition to the venues, each month highlighted the stormwater complaint reporting hotline number and the sanitary sewer overflow reporting information. Also included monthly were various stormwater tips that focus on a pollutant and the negative effects that pollutant has on local water quality along with simple prevention strategies people can incorporate in their everyday life. The helpful tips will assist people to become better stewards of their communities and watersheds. The calendar also featured Alabama Water Watch's new infographic, *America's Amazon*, which promotes Alabama's aquatic biodiversity. The front and back of the calendar featured Vulcan given that he sits atop Red Mountain, which is part of the Red Mountain divide, a southern extension of the Appalachian Mountains and the Cumberland Plateau. And given this geological feature helps form our local watersheds we included a map of Jefferson County visually displaying the 2 major watershed basins (Black Warrior and the Cahaba) and the 10 Sub-basins and how they are located within the larger Mobile Drainage Basin. These calendars were used in various education programs as an easy visual to talk about watersheds given that Vulcan faces the Black Warrior River Sub-Basin and the Cahaba Sub-Basin is behind him. A total of **3000 calendars** were printed and distributed, with **1,500** of those distributed in unincorporated Jefferson County communities. Please see Appendix G.

f. **Clean Water Awareness Campaign**

Stormwater Program staff created the Clean Water Awareness Campaign to inform and educate the public as well as affect behavioral change in order to reduce polluted stormwater runoff caused by the impacts of vehicle fluids, yard chemicals, pet waste,

and litter. The campaign was designed to transcend the County's limited funds, noncontiguous geography and diverse population.

The Stormwater Program staff identified the need to create a system that would improve its ability to deliver the Clean Water Awareness Campaign messages to the public. The staff developed a collaborative network of agencies and organizations whose missions intersect with stormwater pollution prevention in some manner. This collaborative network has resulted in a message delivery system which has expanded the reach of the Clean Water Awareness Campaign by opening access to new audiences, reducing message fragmentation, and enhancing credibility through message uniformity. These partnerships have assisted us in identifying key community contacts to potentially serve as change agents in regard to stormwater pollution prevention. The community contacts have assisted us in targeting programs, tailoring events and encouraging community participation.

A series of posters was created to serve as the flagship component and an e-newsletter and a calendar were launched to provide a cost effective way to support the posters and related components of the Clean Water Awareness Campaign. Please see Appendix G.

g. **Complaint Reporting**

The Stormwater Program has a dedicated Hotline number for the public to report suspected water pollution. This hotline number is displayed on all educational items. Please refer to Illicit Discharges and Improper Disposal (I.I.C.6).

h. **Events**

The County's Stormwater Program information is generally displayed, at the following events, on a table or booth where the public can acquire information about the program, upcoming events and/or educational campaigns. Please see Appendix G unless noted otherwise.

- i. Brighton Youth Explosion. On May 26, 2018, Stormwater Program materials were distributed to **50 people** that attended the Brighton Youth Explosion, an event for kids ranging in age from 6 years old through 21 years along with their parents. Residents from the City of Brighton and various unincorporated communities participated.
- ii. Do Dah Day. On May 19, 2018, Stormwater Program staff displayed Clean Water Awareness Campaign posters at a booth during the event. In addition, Stormwater Program staff reached out to residents from the surrounding community to assist with placing *In a Perfect World* and *It's Your "Doody"* posters on over **40 port-a-potties** set up for the event. Stormwater staff from the City of Birmingham, with which Jefferson County Commission has a memorandum of understanding (MOU), assisted in distributing materials during the event. The *It's Your "Doody"* flyer, household oil and grease containers, stormwater calendars, backpacks, brochures on vehicle maintenance, yard products and illicit discharge brochures along with free pet waste bags were distributed to attendees. The purpose of Stormwater Program staff participation in this event was to bring about awareness of the impacts of pet waste on local water quality and the benefits of pet friendly landscaping to reduce PHF as well as erosion and sedimentation. A fun and interactive poo toss game was offered to teach people the proper behavior for pet

waste disposal. Approximately **1,000 pet waste bags** and flyers were distributed. The Do Dah Day Board estimated that between 20,000 and 25,000 people attended this event.

- iii. Earth Day at the Gardens. On April 21, 2018, the Clean Water Awareness Campaign posters were displayed at a booth along with a fun interactive activity for the kids at an event that was free and open to the public. A visual display showcased how used motor oil and used cooking oil and grease can impact the environment when not disposed of properly along with a glass jar that patrons could shake that contained various common pollutants rain water carries to the local waterways during rain events. Cooking oil and grease recycling containers were distributed along with other printed materials on Jefferson County's Household Oil and Grease Recycling Program along with a current list of all the local Recycling Centers. Jefferson County Soil and Water Conservation District staff, with which Jefferson County Commission has a memorandum of understanding (MOU), Jefferson County Stormwater Program and the City of Birmingham Stormwater Program shared this booth and assisted in the kid's water blot painting activity, which while pretty, also educated about the properties of oil and water which reinforced the visual display showing that oil and water do not mix. It was reported that close to **450 people** attended this annual event held at the Birmingham Botanical Gardens. Please see Appendix C and G.
- iv. Fishing Rodeo. On June 9, 2018, the Clean Water Awareness Campaign posters were displayed at a booth along with a fun interactive activity for the kids at an event that was free and open to the public. A visual display showcased how used motor oil and used cooking oil and grease can impact the environment when not disposed of properly along with a glass jar that patrons could shake that contained various common pollutants rain water carries to the local waterways during rain events. Cooking oil and grease recycling containers were distributed along with other printed materials on Jefferson County's Household Oil and Grease Recycling Program along with a current list of all the local Recycling Centers. Stormwater Program staff and the City of Birmingham Stormwater Program staff shared this booth and assisted in the kid's water blot painting activity, which while pretty, also educated about the properties of oil and water which reinforced the visual display showing that oil and water do not mix. It was reported that close to **2,000 people** attended this annual event held at the East Lake Park.
- v. Letson Farms Home and Garden Community Show. One May 5, 2018, **225 people** attended this local spring event. Reports show that 100 backpacks with the water pollution hotline, 100 illicit discharge and improper disposal brochures and 20 stormwater calendars were distributed at the Jefferson County Sheriff's Office Booth during this event.
- vi. National Neighborhood Night Out. On August 7, 2018, the Water Pollution Reporting Backpacks were displayed at a booth. An estimated **150 people** attended this free event in Oak Grove.
- vii. Rain Barrel Workshop. A total of **2 Rain Barrel Workshops** were held during this reporting period. A combined total of **75 people** attended these events at the Birmingham Botanical Gardens. Both workshops were held at a reduced cost to

the participant made possible by an EPA Environmental Education Local Grant awarded to the Birmingham Zoo. Participants were asked to take a pre and post event evaluation. Details of the events are listed below. Please see Appendix C and G.

On June 16, 2018, **42 people** participated in a Rain Barrel Workshop that was held at the Birmingham Botanical Gardens. Through a working Rain Barrel Workshop Committee, the ACES, AEC, Friends of Birmingham Botanical Gardens, City of Birmingham, City of Bessemer, Jefferson County Department of Health, Jefferson County Soil and Water Conservation District, Jefferson County DDS, Keep Birmingham Beautiful and Storm Water Management Authority hosted the event and provided instruction, materials, and rain barrel assembly assistance for participants. Participants learned the benefits of capturing and storing rain water from their roof and how best to reapply the water in their yard. *Fight the Bite* mosquito prevention kits were distributed to all class participants and door prizes were awarded. The Committee publicized this event through flyers and social media. The Committee members plan to offer more frequent Rain Barrel Workshops to the public in 2019 at various venues.

On June 26, 2018, Birmingham Botanical Gardens in partnership with the Forge Breast Cancer Survivor Center held a Rain Barrel Workshop at the Birmingham Botanical Gardens. While priority was given to forge survivors, the general public was encouraged to attend. It was reported that **33 people** participated in the event.

- viii. Urban Forestry Fair. On February 21, 2018, Stormwater Program staff provided an educational game for **410 fifth grade students** from various schools within Jefferson County at the annual Urban Forestry Fair. The interactive and engaging game is designed to reinforce the idea of conserving natural resources and improving water quality. Additionally about 100 volunteers from various agencies and other organizations donated their time to this event. Students learned about their urban environment, habitat, the benefits of trees, tree anatomy, and watersheds along with the common pollutants found in water.

- i. **Friends of Birmingham Botanical Gardens**

The Friends of Birmingham Botanical Gardens (FBBG) coordinated and administered various children's programs and adult classes during its past fiscal year ending in June 2018. More than **10,000 children and adults benefited** from the FBBG education offerings which would not have been possible without the support of the **1,000 volunteers** that gave a **total of 2,100 hours** to the education programs and activities. The FBBG promotes knowledge and appreciation of plants and the environment with educational offerings to over 350,000 visitors annually. The FBBG Strategic Plan emphasizes and implements practices that reduce stormwater runoff. The Jefferson County Commission formalized an ongoing Memorandum of Understanding which enhances the efforts of the Storm Water Management Division and FBBC. Please see Appendix C and I.

- j. **Jefferson County Water Festival**

Stormwater Program staff serve on the festival committee that planned and implemented the fourteenth Annual Jefferson County Water Festival held on May 3,

2018, at University of Alabama Birmingham (UAB). The Water Festival educated **673 fourth grade students**, teachers and parents from various schools from across Jefferson County. The purpose of the Water Festival is to educate students about where drinking water comes from and how to protect and keep it clean for themselves and future generations. Students participate in three hands-on activities and experiments and attended the Fishing Magicians magic show. All the hands-on activities directly correlate with the Alabama Course of Study Science and SAT Objectives for fourth grade. Prior to the festival, students from participating schools submitted artwork depicting the Water Festival theme, *It's a Waterful Life*, chosen for this year. The festival committee selected one winner whose artwork was used as the Water Festival logo on t-shirts distributed free to participating students, teachers and volunteers. Please see Appendix G.

k. **Media**

Various strategies have been implemented to utilize both traditional and new media. Please see Appendix G.

- i. An email database of **26 local print and electronic media contacts** is utilized to assist Stormwater Program staff in informing Jefferson County residents about Clean Water Awareness Campaign information as well as announcements regarding workshops, activities, and events.
- ii. A total of **10 articles** with stormwater pollution prevention information and links to resources aimed at reducing stormwater pollution were written and submitted for publication to The Cutoff News during this reporting period. The Cutoff News is an online publication which provides news and events to the western area of Jefferson County through a website and Facebook presence. The submitted articles were targeted to County residents and encourage stormwater friendly behaviors as well as encouraged readers to participate in upcoming events and opportunities which support responsible stormwater management.
- iii. As part of the Litter Quitters Video Competition, **2 interviews** on Talk of Alabama were held to promote the video competition. For both interviews representatives from the City of Birmingham Stormwater Program, Jefferson County Department of Health's Watershed Protection Program and the Jefferson County Stormwater Program were interviewed. The first segment which aired on April 12, 2018 was to introduce the Litter Quitter Project and to invite the viewers to go to the YouTube Channel to watch all the videos that were created. The second segment aired on April 25, 2018 where the students of the winning school were interviewed and their winning video was shown.
- iv. Press releases and media alerts with stormwater pollution prevention events, initiatives, accomplishments, and information are written and distributed to local media and posted on social media and the County website through the County Manager's Office.
- v. Stormwater Program staff utilizes the social media capabilities of other local organizations and agencies with which a signed ongoing Memorandum of Understanding exists in order to assist with distributing Clean Water Awareness

Campaign information and informing the public about upcoming workshops, activities, and events.

l. **Monitor Slides**

A series of slides was created to display Stormwater Education information and events as well as components of the Clean Water Awareness Campaign posters. The slides deliver stormwater pollution prevention information in a highly visual manner in order to attract attention while overcoming language barriers, and utilize catchy headlines and taglines to further engage the public. Some slides are a call to action outlining the problems with various pollutants on our environment and easy realistic solutions that can be implemented by the public to reduce stormwater runoff while others are informational about how the public can get involved with our program such as how to report pollution or host a volunteer roadside litter cleanup. A total of **38 slides** have been created.

These slides are displayed on the Jefferson County Revenue Department's monitors located in the downtown Jefferson County Courthouse. The monitors can be seen by any resident of Jefferson County who comes in person to renew a vehicle or boat tag and/or driver's or business license. Please see Appendix G.

m. **Newsletters**

A quarterly e-newsletter, *JeffCo H2o News*, was launched in 2012 and continues to provide a cost effective way to support the posters and related components of the Clean Water Awareness Campaign. The e-newsletter content expands upon the poster topics and provides links to resources that can assist positive behavioral change. The e-newsletter content expands upon the poster topics and provides links to resources, activities, and events that can assist positive behavioral change. The e-newsletter is distributed electronically on a quarterly basis to **2,100 Jefferson County employees, 246 local organizations, businesses and individuals, and 26 print and electronic media**, and is posted at the **Jefferson County Commission website, Facebook page, and on Twitter**. Recipients are encouraged to and often do redistribute the e-newsletter to their own contacts. Printed copies of the e-newsletters are available at events and presentations during the year. A signup sheet is also available for the public to register for future e-newsletters. Please see Appendix G.

n. **Pesticide, Herbicide Fertilizer/Landscape (articles, publications and workshops)**

During this reporting period, several workshops were held, various articles and newsletters written, and programs initiated in order to provide residents, private land owners, and those that lease land from Jefferson County information specific to the proper use and application of yard chemicals, care of landscaping and pest management, and sustainable home lawn and garden practices. These activities and publications were promoted through the Jefferson County Clean Water Awareness Campaign and by various partnering organizations including Alabama Cooperative Extension System, Friends of Birmingham Botanical Gardens, Alabama Green Industry Training Center and Green Industry Web Portal. Please refer to Major Accomplishments, Pesticides, Herbicides, Fertilizers (II.C.5) and see Appendix G and I.

- i. *Step Away From The Spray – Fight The Bite!* During this reporting period, an Integrated Pest Management (IPM) Program was promoted. The program makes

available information that helps residents manage pests in a more environmentally friendly manner, as well as, provides references to experts who offer homeowners a variety of targeted controls. It advises residents about the harmful effects of indiscriminately using broad spectrum pesticides because of the unintentional consequence these materials have on beneficial insects, natural predators and water quality. The program encourages wildlife habitat that attracts animals known to assist in controlling pests and other unwanted bugs. It provides a biologic tool, *Bacillus thuringiensis israelensis* (Bti) tablets, to assist residents in managing a common Alabama pest that people routinely treat with broad spectrum pesticides. These materials were made available at the Stormwater Program office, County Satellite Courthouses, community based meetings, events, seminars, workshops and given to partnering agencies to distribute.

- ii. **Alabama IPM Communicator.** A statewide newsletter filled with articles and publications from various accredited school researchers and Alabama Cooperative Extension personnel, includes seminars and other training events along with helpful homeowner information on various topics pertaining to pest management and sustainable home lawn and garden practices.
- o. **Posters**

A series of posters was created to serve as the flagship component of the Clean Water Awareness Campaign. The posters deliver stormwater pollution prevention information in a highly visual manner in order to attract attention while overcoming language barriers, and utilize catchy headlines and taglines to further engage the public. The posters juxtapose potential stormwater pollution problems with practical solutions that focus on the benefits they bring to residents. A total of **30 posters** have been created.

These posters are printed and displayed at various locations throughout Jefferson County as well as distributed electronically in various newsletters, blogs and articles, including the downtown Jefferson County Courthouse Revenue Monitors, in kiosks at the Turkey Creek Nature Preserve, and at various events throughout the year. Please see Appendix G.

i. ***From Roof to Stream***

This stormwater pollution prevention **poster** was developed to serve as an umbrella under which all other Clean Water Awareness Campaign posters and programs will reside. The poster informs people how their everyday activities can have a negative effect on water quality, but stresses that these effects can be prevented.

ii. ***1 Drop Matters!***

This oil and grease/vehicle fluid program contains **2 posters** that focus on proper maintenance, cleanup and disposal of fluids from all types of vehicles. The posters were created to educate vehicle owners that one drop of oil leaked on the ground really does matter. One drop of oil dripping from each of the 740,000 vehicles registered in Jefferson County adds up to more than 64 quarts of oil, which is capable of polluting 16 million gallons of water a day. These posters also include the following information:

1 drop of oil dripping per car X 740,000 cars in Jefferson County = 740,000 drops of oil  
740,000 drops ÷ 11,520 drops per quart = 64 quarts of oil  
4 quarts are capable of polluting 1 million gallons

iii. ***Bag It and Trash It!***

This pet waste/nutrient program contains **2 posters** that focus on pet owners. These posters were created to inform pet owners on the importance of picking up and properly disposing of pet waste both at home and on public lands. Preliminary discussions were held with the Alabama Veterinary Medicine Association, Greater Birmingham Humane Society, and Doo Dah Day to establish partnerships that would assist the Stormwater Program with its pet waste management education efforts.

iv. ***Household Oil and Grease Recycling***

This program contains **6 posters** and one flyer that promote proper disposal of used household cooking fats oil and grease (FOG). The posters focus on the correlation between pouring FOG down household drain pipes resulting in clogs, sanitary sewer overflows and stormwater pollution. A companion poster focuses on the correlation between pouring FOG outside on the ground and stormwater pollution. The flyer details the guidelines of the program and promotes the positive results from participating in the recycling program and gives information on how to properly dispose of these items. These materials are a shared resource between ESD and the Stormwater Program. Please also refer to Major Accomplishments, Illicit Discharges and Improper Disposal (I.C.6).

v. ***It's 'Mulch' Better!***

This runoff reduction and erosion prevention program contains **8 posters** which address the benefits of mulching, such as moisture retention, weed reduction, managing yard debris, reducing soil erosion, and nutrient delivery. The posters also focus on the ways in which utilizing mulch reduces storm water runoff, reduces the need for fertilizers and herbicides and helps replenish ground water.

vi. ***Reduce Runoff!***

This program contains **1 poster** that focuses on stormwater polluted runoff. It informs people that water, either by rain or irrigation, carries lawn chemicals, pet waste and vehicle fluids directly to creeks. It reminds people to direct downspouts and sprinklers to water only vegetation and not impervious surfaces.

vii. ***'Spread' the Word***

This pesticide, herbicide, and fertilizer program contains **6 posters** that focus on people who apply lawn and garden chemicals. These posters were created to educate the public on the importance of applying the appropriate product in the correct amounts. The following is emphasized: test the soil before purchasing products, calibrate equipment to prevent applying too much, fertilize correctly by not over spraying the product on paved surfaces, and clean up any excess products or yard waste when finishing the job. The last two posters in this series pertain to bees and the impact pesticides have on the pollinators. These posters remind citizens that insecticides are not choosy; hence, they kill a wide range of insects, not just the pesky ones.

viii. ***Trash Blows! Trash Floats!***

This floatable/litter abatement program contains **4 posters** that focus on people transporting trash, debris and other waste to landfills. Intentional or not, items that blow out of vehicles becomes litter that pollutes waterways. Flyers, posters and demonstrations were used to help teach people to “tarp and tie” the load and to utilize a “brick and bucket” in the back of the pickup to hold trash.

At the downtown recycling center, run by the AEC, a variation of the Trash Blows! posters are on display. These posters were customized to reflect recyclable materials. These customized posters were also part of the graphics placed on the recycling trailers which are located throughout the County. Please refer to Major Accomplishments, Illicit Discharges and Improper Disposal (II.C.6).

p. **Presentations**

Presentations directly related to the County’s Stormwater Program, water quality and the Alabama MS4 NPDES requirements were given in various formats. Presentations were made at neighborhood meetings, schools, Erosion and Sedimentation Control workshops, and community forums. Please see Appendix G.

- i. Birmingham Summer Institute Camp. Stormwater Program staff made **4 presentations** to **120 underserved 3<sup>rd</sup> through 6<sup>th</sup> grade students** on June 4, 2018. Topics taught include vegetable growing, the water cycle and the impacts of pollution, pollinators and their role with native wildflowers. This camp is in its 2<sup>nd</sup> year taking a holistic approach to nurturing students with an emphasis on maintaining and improving math and reading skills during the summer break.
- ii. Girls Inc. Stormwater Program staff made a total of **9 presentations** to a group of **25 students** attending the after school program at the Girls Inc. Crestwood campus. Students from various schools attended the gardening series program which took place on February 2 (seed propagation), February 9 (soil makeup, soil health, vermicomposting), February 16 (plant botany, pollination, water cycle), February 23 (planting techniques), March 2 (garden design, seasonal gardening), March 9 (propagation), March 16 (planning design and planting in place), March 23 (germination, labeling and tasting plants), and April 6 (eating the garden). Yard chemical use, storage and disposal along with rain collecting and storing and reapplying with barrels were discussed.
- iii. Erosion and Sedimentation Control (ESC) Workshops. Stormwater Program staff made **1 presentation** at the ESC workshop held on April 26, 2018, to teach single family home builders, contractors, municipal employees and others involved in land disturbance activities about the requirements of the MS4 NPDES Permit, their responsibilities under Article 13 of the Jefferson County Subdivision and Construction Regulations and the proper usage of Best Management Practices (BMPs) on construction sites within Jefferson County. Please refer to Major Accomplishments, Construction (II.C.9.h).
- iv. Erwin Elementary School. A total of **2 presentations** were given to **47 3<sup>rd</sup> grade students**. The presentations included the water cycle bracelet activity, seeds and germination, vegetable gardening and pollinators.

- v. McAdory High School. A total of **5 presentations** were made to **322 10<sup>th</sup> and 12 grade students** on November 3, 2018. These presentations were part of the Valley Creek Cleanup Litter Quitters Competition to introduce the video competition and give an overview of watersheds and the impacts that various pollutants has on local water quality. The presentation narrowed in on the Valley Creek Watershed and how trash thrown out of vehicles or tossed on the ground becomes litter and the impacts that litter has on local water quality.
- vi. McCalla Planning and Zoning Open House. A total of **2 open houses** were held at McAdory Middle School on August 28 and September 11, 2018 as part of the Jefferson County Economic and Industrial Development Authority and Jefferson County to receive public input on the Authority's need to expand the Jefferson Metropolitan Industrial park. This proposed change would require a modification of the County's Comprehensive Plan for the Shades Creek Watershed and the P&ZC of Jefferson County. During these open houses, presentations were made to the public on the overall project, impacts to roadways, traffic and the environment from runoff. It was reported that 140 people attended and provided input to the proposed plan. Please see Appendix C.
- vii. Minor High School. Stormwater Program staff made **1 presentation** on January 15, 2018 as part of the Minor High School Volunteer Cleanup assembly to **195 people**. The purpose of this assembly was to inform cleanup volunteers the negative impacts litter has on our environment and local waterways and to encourage the students, teachers and administrators to talk to their family, neighbors and friends to stop littering and participate in future roadside cleanups. This event was spearheaded by the Village Creek Society and Minor High School Environmental Science Club. Please also refer to Major Accomplishments, Roadways (II.C.3).
- viii. Jefferson County Master Gardeners. On August 14, 2018, Stormwater program staff was invited to be the key speaker at the Master Gardeners monthly meeting. The presentation, titled *Beyond the Roof: an introduction to the Jefferson County Stormwater Program* was made to **67 Master Gardeners**. Topics discussed included history of water regulations the County's MS4 Permit requirements, information on the litter and debris, pet waste, lawn and garden chemicals, bare soil, vehicle fluids and cooking oil and grease to our local waterways and how these pollutants can be prevented were also included.
- ix. Oak Grove High and Middle School. A total of **10 presentations** were made to **600 students** in grades 7th, 9th, 10th, 11th and 12th. These presentations were part of the Valley Creek Cleanup Litter Quitters Competition to introduce the video competition and give an overview of watersheds and the impacts that various pollutants has on local water quality. The presentation narrowed in on the Valley Creek Watershed and how trash thrown out of vehicles or tossed on the ground becomes litter and the impacts that litter has on local water quality.
- x. Stormwater program staff gave **6 presentations** to Jefferson County communities, local organizations, schools, and neighborhood associations in an effort to obtain community participation in roadside litter cleanup events and to promote the use of integrated pest management practices through the *Step Away From the Spray* –

*Fight the Bite!* Campaign. The presentations also included information about the effects of many pollutants such as: litter and debris, pet waste, lawn and garden chemicals, bare soil, vehicle fluids and cooking oil and grease to our local waterways and how these pollutants can be prevented. 2018 Stormwater calendars were distributed and the pollution reporting number and the sanitary sewer overflow hotline numbers were emphasized. The meetings were held on October 19, 2017 (Rock Mountain Lakes Neighborhood Meeting); January 25, 2018 (McDonald Chapel Neighborhood Association; March 15, 2018 (Rock Mountain Lakes Neighborhood Association; April 4, 2018 (Minor Heights Neighborhood Association; May 14, 2018 (Edgewater B Community meeting; and July 16 (Minor Heights Community meeting). Please refer to Major Accomplishments, Roadways (II.C.3).

- xi. The UAB Center for Community Outreach Development (CORD) Summer Science Program. Stormwater Program staff provided **3 educational presentations** (June 7, 2018; June 21, 2018; and July 12, 2018) for the “Over the Hills and Through the Vales” Camps. The students viewed the Weather Channel’s *After the Rain* video, played the USGS *Water Jeopardy Game*, and watched a PowerPoint presentation called *Beyond the Roof*. A total of **48 students** attended the 6<sup>th</sup> Grade CORD Summer Camps.
- xii. Valley Creek Cleanup / Litter Quitter Video Competition Interview. A total of **3 interviews** were given to local media about the Valley Creek Cleanup. On March 13, a radio interview was held to promote participation in the Valley Creek Cleanup held on March 17, 2018. **Two additional interviews** were held on ABC 33/40 Talk of Alabama to promote the Litter Quitter Video Competition which was the educational component that supported the creek cleanup. Please also refer to Major Accomplishments, Roadways (II.C.3).

q. **Staff Development and Training**

Opportunities are offered for County staff to earn certifications; affiliate and join with professional associations; attend conferences, classes and webinars; in order for them to acquire new knowledge, advance job skills, and meet Permit requirements.

- i. Stormwater Program staff participated in **27 various training, staff development, and networking opportunities**. These events are in addition to the other events that have already been reported in prior sections. For a complete listing, please see Appendix G.
- ii. The Stormwater Program purchased Municipal Pollution Prevention training materials. The “**Preventing Stormwater Pollution: What We Can Do**” video and accompanying Stormwater Pollution Prevention Training Module Series includes the following topics: Introduction: Preventing Stormwater Pollution; Construction Activities and Land Disturbances; Fleet Maintenance and Material Handling; Streets and Drainage Maintenance; Parks and Grounds Maintenance; and Solid Waste Management. These items are available to various Departments for staff to view. Please see Appendix G.

r. **Surveys**

An analysis of the Stormwater Survey implemented during the prior two reporting years was run by faculty from the Department of Communications Studies, University of Alabama – Birmingham. The analysis is being used by Stormwater Program staff to re-evaluate current Clean Water Awareness campaign messages, refine messages to better address targeted audiences, identify and remove any obstacles to behavior change, and more efficiently direct resources. Please see Appendix G.

s. **Turkey Creek Nature Preserve (TCNP)**

Through a formal partnership, established by an ongoing Memorandum of Understanding, the TCNP assists the Stormwater Program staff in achieving educational goals by including a stormwater education component to all student curriculums, community events and cleanups. TCNP also provides various opportunities to promote the Clean Water Awareness Campaign messages at their blog site, and in kiosks throughout the park. TCNP houses a recycling trailer for area residents to properly dispose of paper aluminum and plastic. Please refer to Major Accomplishments, Roadways (II.C.3) and see Appendix G and I.

t. **Video Competition (Litter Quitters)**

A Litter abatement/prevention video competition was held among public high schools in the Valley Creek Watershed from April 12-22, 2018. The schools competed for cash prizes and a chance to have their video air as a paid advertising spot on local television stations that will viewed by those in the Jefferson County area. A web site (<http://www.jeffersonco.wixsite.com/valleycreek> ) that housed educational material on the Valley Creek Watershed, litter and its impacts on the environment was created. This website also linked to the Litter Quitter YouTube Channel (<https://www.youtube.com/channel/UCZXJwztkliMIS2f7EF6Hffg>) that housed the schools videos that were entered into the competition.

This video competition was to expand the education and outreach efforts associated with the Valley Creek Cleanup. The competition targeted young drivers in hopes they would become the change agents to their family and friends by educating them about the negative impacts of litter. The goals of displaying the winning video on prime time television were to educate citizens throughout Jefferson County on a broader scale about the problems with litter. ABC 33/40 promoted this video competition on their Good Day Alabama morning talk show on April 12 and announced the winner on the April 24, 2018 show and interviewed the winning school's students who were involved in this event. A total of \$7,250 dollars were spent on paid advertising on WTTO and WABM, and an additional **60 promotional announcements** about this video competition was made to promote viewers to watch and vote for their favorite video. Power Point presentations about the video completion were made to either of the 10 high Schools in the Valley Creek watershed between January and March, 2018. The High Schools were: Bessemer High School, Fairfield High School, and Hueytown High School. Midfield High School. McAdory High School. Oak Grove High School, Pleasant Grove High School and Wenonah High School. The presentations included information on watersheds featuring Valley Creek, litter and its impacts on the environment and how to participate in the Valley Creek Cleanup. The winners of the video competition were Wenonah High school in first place with **426 votes**, Oak Grove high school in 2<sup>nd</sup> place with **409 votes** and Fairfield High School in 3<sup>rd</sup> place with **294**

**votes.** Wenonah High School students were featured on ABC33/40's Talk of Alabama program and an outtake from that video was also used to produce a commercial promoting reduction of littering in our county watersheds. This commercial was broadcast across the county on ABC33/40 and its sister stations, CW21 and My68. The funding for this project was provided by CAWACO RC&D and a Jefferson County Community Grant. Creative Directions produced and distributed the commercial on behalf of the Video Competition Committee and the Jefferson County Soil & Water Conservation Foundation. In summary, the YouTube videos collected 4,885 distinct views with nearly 200 shares. The paid advertising gave a combined totals if **135 messages** aired with a **1,506,900 impressions** delivered. The breakdown was WABM-TV MY68 aired **78 times** and delivered **672,600 impressions**. WTTO-TV CW21 aired 39 messages and delivered 572,200 impressions. WBMA-TV ABC33/40 aired **18 messages** and delivered **261,000 impressions**. The first place winners were nominated and won the Alabama Wildlife Federations Youth Conservations of the Year award. The Jefferson County Commission presented the top three winning schools resolutions for their achievements. Please see Appendix B and G.

u. **Website**

The Jefferson County website had to undergo a major redevelopment because of a server failure. This resulted in the loss of a significant amount of data and every County Department's website to be recreated with new software. This, in conjunction with the newly merged Development Services Department, has prolonged the creation of the new Stormwater Program pages. Until then, temporary pages have been posed (<http://www.jccal.org/Default.asp?ID=1804&pg=Stormwater+Management+Program>). Please see Appendix G.

## **11. Monitoring Programs**

Jefferson County began its own Stormwater Program at the beginning of Permit Year 2009-2010. Initially, staff reviewed the unincorporated area of Jefferson County in order to set up the monitoring plan. The staff established **6 instream** monitoring locations to be sampled each season during wet and dry weather periods. The Permit requires all outfalls to be screened during the permit cycle. As previously reported, 100% of the MS4 outfalls have been screened. (Dry weather screening of the MS4 will resume when the new MS4 Permit is issued, should the same requirements be included therein). In March 2010, Jefferson County submitted a revised SWMP to ADEM that included an Interim Monitoring Plan. The revised monitoring plan has been accepted by ADEM with no further comments. Please see Appendix A.

During Permit Year 2017-2018, Stormwater Program staff collected **29 instream** and **6 investigation samples** for wet and dry weather screening. This information is summarized and quantified in the Summary Tables. Please see Appendix H.

## **D. PROGRAM STRENGTH AND WEAKNESSES**

The strength of the Jefferson County Stormwater Program was outlined in detail within the Major Accomplishments Section. Please refer to Section II.C.

- A limitation of the Jefferson County Stormwater Program is its current water quality monitoring data. Establishment of trends in stormwater pollutant concentrations depends on a vast amount of water quality data. Furthermore, the climate during the year was not conducive for collecting all planned samples, much like that of years past. For most of 2017, central Alabama was deemed the “hotspot for tornadoes,” by the National Weather Service with 36 of the state’s 55 striking there. Even with heavy rains in the winter, Alabama remained in a drought at the beginning of 2018. Jefferson County experienced both severe and extreme drought as classified by The Drought Monitor. The spring and summer were rainier than indicated in the long-range weather forecast with many areas experiencing significant flooding for days on end. One after another, meteorologists, statistics, and news reports documented weather extremes statewide. Appendix H includes supporting documentation of the adverse climatic conditions which prohibited the collection of all samples.
- A second limitation of the Jefferson County Stormwater Program is the way in which the County is geographically situated and politically structured. The 50 receiving waters specified in the Permit flow in and out of both incorporated and unincorporated areas of the County. While the County has the authority over unincorporated areas of Jefferson County, this authority has been removed in incorporated areas and left to individual jurisdictions. There are no consistent programs, regulations or standards for monitoring that assist the County with its evaluation of water quality improvement.
- A strength of the County’s Stormwater Program has been its public education program. While the County’s Stormwater Program is responsible for unincorporated areas of the County, its educational efforts often extend into incorporated areas of the County, thereby educating people who reside in adjoining areas. The launch of the Clean Water Awareness Campaign and its poster series has provided a method to disseminate information to the public as well as serve as a catalyst for partnering with other entities. Stormwater Program staff has focused on developing and formalizing alliances and partnerships with agencies, organizations and associations which have similar goals in order to expand its educational reach throughout Jefferson County. The staff also implemented a countywide survey to assess knowledge level and behaviors related to improving water quality. The results of the survey will help focus efforts and allocate resources to more efficiently and effectively deliver public education.
- A particular strength of the County’s Stormwater Program public education efforts has been its volunteer roadside litter cleanup program. In 2011, the Jefferson County Commission implemented a series of cutbacks in personnel and services following the loss of a major source of funding which resulted in filing Chapter 9 bankruptcy. One consequence of these reductions was the inability for the County to remove litter and trash from along roadways. In 2012, the County’s Stormwater Program staff identified an opportunity to help residents address littering in their communities by partnering with the Alabama Chapter of People Against a Littered State (AL PALS). This partnership became the foundation of the Jefferson County Volunteer Roadside Litter Cleanup Program which provides year round support and resources for communities which choose to participate. The goals of the

Jefferson County Volunteer Roadside Litter Cleanup Program are threefold: 1. Provide a way to reduce litter, trash and floatables by empowering and equipping residents to take ownership of their communities and affect change; 2. Increase program participation while decreasing the amount of litter removed from roadways due to increased resident awareness and behavioral change; 3. Provide the Stormwater Program staff a gateway into Jefferson County communities in order to provide educational programs and resources aimed at reducing other types of nonpoint source pollution.

- Jefferson County was recognized at the Alabama PALS Governor’s Awards Program which was held on November 8, 2017 for its outstanding commitment in the areas of local cleanup efforts, environmental education and volunteerism. Jefferson County Sheriff’s Office, Minor High School and Middle School, Oak Grove High School Student Government Association, Rock Mountain Lakes Association, Jerry Anderson and Diane Goggins from the Providence community, Corey and Mary Garret, and the Jefferson County R&TD all received awards in their respective categories. The Jefferson County Development Services Department received the Don Heins Memorial Award in recognition for the dedication and hard work with the volunteer litter cleanups. Please see Appendix B.
- The National Association of Counties (NACo) granted Jefferson County the Best in Category Winner for a 2018 Achievement Award for the Volunteer Litter Cleanup Program in the category of volunteers. Please see Appendix I.
- The Alabama PALS Summer Quarter newsletter, *The PALS Prints Volume 38*, featured roadside cleanups held throughout Jefferson County this past spring. Please see Appendix B.
- A strength of the County’s Stormwater Program is the selection of the Accela Civic Platform by Jefferson County to move its planning, permitting, inspection, plans review and code enforcement services toward a web-based platform. Implementing Accela will transition the County departments away from paper based processes and siloed software systems that do not communicate with each other toward an integrated platform in which all related Departments will participate. The implementation of this software also will deliver enhanced efficiencies and capabilities to the services and functions that the County offers to the public. Please refer to Future Direction (II.E.7) and see Appendix J.
- The Jefferson County Manager’s Office, Human Resources Department, and Receiver decided to merge the current Storm Water Management, Land Planning and Development Services, and Inspection Services Departments into one department, effective August 2016. The creation of the Development Services Department has provided the opportunity to increase operating efficiencies and enhance customer service by more effectively utilizing personnel; improving services provided to the public by streamlining permitting, inspection and approval processes; and applying a more customer focused business model. This Department will continue to implement Jefferson County’s Stormwater Program in addition to providing other services to the public. Please Refer to Major Findings (II.B.2) and see Appendix I.

## **E. FUTURE DIRECTION**

- Jefferson County will be in the process of implementing the new NPDES MS4 Phase I Permit requirements that was issued September 27, 2018.
- Work was completed in partnership with the City of Birmingham on a 12 month 2019 calendar which will be printed and distributed during the 2018-2019 Permit Year. The calendar features outdoor venues that reflect the history, diversity and future of Jefferson County. Each month highlights a venue with a photo as well as a description of its unique features and attractions. The venues were chosen based upon their contributions to reducing pollution in stormwater runoff and improving water quality in local creeks and streams through their preservation, conservation, restoration, and education initiatives. We hope that this calendar will encourage people to visit the featured locations and experience the unique ways in which each portrays our past, shapes our future and contributes to our quality of life. Please see Appendix J.
- Work has begun to update the look and content of the Clean Water Awareness Campaign Posters. Discussions on installing permanent poster holders in the new office area windows or other areas of Jefferson County Commission's properties are ongoing.
- Work began on expanding the Valley Creek Student Anti-litter Video which includes all public High Schools located in the Black Warrior Sub-Basin in Jefferson County. Efforts will focus on driving age teens attending public high school within Gurley Creek, Turkey Creek, Locust Fork Black Warrior River, Five Mile Creek, Valley Creek, Village Creek Watersheds by implementing a project that will teach the negative impacts of littering and better engage this demographic in proactively preventing litter. A new Litter Quitter Committee has been formed and will be responsible for reaching out to the public high schools to invite them to participate in this event. Please see Appendix J.
- Further discussions will be held with the AEC in an effort to identify opportunities for Jefferson County residents to properly dispose of Household Hazardous Waste on a regular basis for free or at a reduced cost can occur. These discussion with AEC staff are to help identify additional potential partners to contact to determine interest, resources and capability to expand current household hazardous waste day events.
- Preliminary research has been done to investigate the feasibility of Jefferson County utilizing Drone technology to aid in site inspections, spill responses and water monitoring.
- The County's contract with its current waste hauling vendor is up for renewal in 2019. The Stormwater Program will propose that the new contract will include mandatory curbside pickup and the placement of roll-off dumpsters in areas prone to illegal dumping. The potential dumpsters would provide residents with the means for proper disposal of trash and other discards. Given that no mandatory curbside trash pickup exists, Preliminary research has been done to investigate the feasibility of Jefferson County utilizing its legal authority under AL Code § 22-27-3 to implement such program as a means to reduce the incidents of improper disposal of trash, debris, and other discarded materials along roadways. Should either of these programs be implemented, an education component to promote and facilitate the use of the dumpsters and curbside pickup will be created and implemented. Please see Appendix J.

- The County's DDS began the process of upgrading its computer based systems in order to better integrate the merger of the previous three departments (Land Planning and Development Services, Inspection Services and Storm Water Management) into one and streamline services provided to the public. To assist in that process, Jefferson County selected the Accela Civic Platform to move the County's planning, permitting, inspection, plans review and code enforcement services toward a web-based, technology-driven solution to improve service delivery, efficiently process building permits, leverage mobile capabilities for field staff and speed up approvals for new construction. Implementation of this new software began in January 2018, with full integration expected in April 2019. Please refer to Strength and Weaknesses (II.D.6) and see Appendix J.
- The County's DDS began updating and improving its webpages, located within the Jefferson County website [www.jccal.org](http://www.jccal.org) , to better reflect the merger of the previous three departments into one and to better provide the public with information and resources regarding the services delivered by the new combined department.

### **III. Summary Table**

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Structural Controls	Operate the MS4 and structural controls to reduce pollutant discharge	Maintenance and inspection performed	●	10 stamped stormwater inlet covers installed	See <b>Appendix B</b>
	Operate the MS4 and structural controls to reduce pollutant discharge	Maintenance and inspection performed	●	9,505.24 cubic yards removed from ditches	See <b>Appendix B</b>
New Development and Significant Redevelopment	Comprehensive master planning process to minimize pollutant discharge	Minimize pollutants after construction is complete	●	200 native trees planted along Shades Creek	See <b>Appendix C</b>
	Comprehensive master planning process to minimize pollutant discharge	Minimize pollutants after construction is complete	●	60 subdivision cases were approved	See <b>Appendix C</b>
	Comprehensive master planning process to minimize pollutant discharge	Minimize pollutants after construction is complete	●	Redevelopment plans for the 2011 tornado-stricken communities continue; 4 open houses held for public input to allow for modifications to Comprehensive Plan and development plans	See <b>Appendix C</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Roadways	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	1,684 45-gallon bags of litter and trash were removed from 106.6 miles of roadways by 966 probationers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	R&TD removed 206 bags and 418 tons of trash from roadside	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	19.103 tons of litter were removed from Unincorporated Jefferson County roadways in 27 Cleanups by 460 volunteers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	30 tons of debris were removed from Turkey Creek in 15 Cleanups by 250 volunteers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	7 tons of debris were removed during the Warrior River Bankhead Cleanup by 35 volunteers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	15.165 tons of trash and debris and 1.1 tons of tires were removed from Valley Creek in 11 Cleanups by 479 volunteers	See <b>Appendix B</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Roadways Continued	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	29.35 tons of trash and debris removed from Village Creek watershed in 7 Cleanups by 566 volunteers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	2.67 tons of trash, debris, and tires were removed from Cahaba River roadsides in 4 Cleanups by 61 volunteers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	0.52 tons of trash and tires removed from Shades Creek in 2 Cleanups by 86 volunteers	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	Street maintenance and litter control	●	Executed upon public complaint or as-needed basis	See <b>Appendix B</b>
	Operate and maintain to minimize pollutants	De-icing activities	●	Jefferson County applied 252.4 tons of sand on as-needed basis	See <b>Appendix B</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Flood Control Projects	Assess impacts on water quality	Evaluate structures based on Jefferson County Floodplain Ordinance	●	All flood management projects were reviewed; 0 Flood control permits were issued; 21 floodplain applications	See <b>Appendix B</b>
Pesticide, Herbicide, and Fertilizer Application	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	●	Chemicals are stored in secure, climate controlled warehouses	See <b>Appendix B</b>
	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	●	General Services applied 130 gallons of herbicide	See <b>Appendix B</b>
	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	●	Camp Ketona applied 2,551 gallons of herbicide to 6,046 acres of land	See <b>Appendix B</b>
	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	●	Camp Bessemer applied 2,196 gallons of herbicide to 3,905 acres of land	See <b>Appendix B</b>
	Reduce pollutant discharge related to storage and application	Implement controls for application	●	Chemicals minimally applied to right of way and County owned properties by 13 Licensed Applicators.	See <b>Appendix B</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Illicit Discharges and Improper Disposal	Detect and eliminate discharges to the MS4	Establish and publicize a hotline for public use	●	Hotline and email notifications were established	See <b>Appendix D</b>
	Detect and eliminate discharges to the MS4	Household and Hazardous Waste Drop Off Days	●	1 event; 76 households; 0.6 tons latex paint; 2 tons flammable paints; 0.25 tons aerosols; 0.1 tons fertilizers; 0.15 tons cleaners 2.1 tons electronics; 0.224 batteries were collected	See <b>Appendix D</b>
	Detect and eliminate discharges to the MS4	Electronic and Battery Drop Off Days	●	2 events; 3,989 tons of electronics and 0.197 tons of batteries were collected	See <b>Appendix D</b>
	Detect and eliminate discharges to the MS4	National Prescription Drug Take-Back Event	●	456 tons of medication were collected nationwide	See <b>Appendix D</b>
	Detect and eliminate discharges to the MS4	Jefferson County ESD operates oil and grease recycling program	●	3,694 gallons of cooking oil and grease were collected	See <b>Appendix D</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Spill Prevention and Response	Prevent, contain, and respond to spills	Conduct spill response	●	EMA responded to 50 spills	See <b>Appendix D</b>
Industrial & High Risk Runoff	Identify and control pollutants in stormwater discharges	Inspection of food service facilities	●	2,407 sites were permitted, 2,145 sites were inspected, and 113 sites were non-compliant	See <b>Appendix D</b>
	Identify and control pollutants in stormwater discharges	Inspection of industrial and high risk runoff sites	●	1 landfill & 2 transfer station inspections conducted	See <b>Appendix E</b>
	Identify and control pollutants in stormwater discharges	Jefferson County Fleet Management operates in-house recycling program	●	24,660 pounds of scrap metal were recycled	See <b>Appendix E</b>
	Identify and control pollutants in stormwater discharges	Jefferson County Fleet Management operates in-house recycling program	●	698 batteries were recycled	See <b>Appendix E</b>
	Identify and control pollutants in stormwater discharges	Jefferson County Fleet Management operates in-house recycling program	●	25,432 quarts of motor oil were recycled	See <b>Appendix E</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Construction Site Runoff	Reduce pollutant discharge from construction sites	Staff training as Qualified Credentialed Inspector (QCI)	●	17 Jefferson County employees certified	See <b>Appendix F</b>
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	●	313 Land Disturbing Permits were issued; 20 Commercial permits, 289 Residential permits, and 4 Government permits	See <b>Appendix F</b>
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	●	103 Exclusions were issued; 15 Commercial exclusions and 88 Residential exclusions	See <b>Appendix F</b>
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	●	870 construction inspections were performed	See <b>Appendix F</b>
	Reduce pollutant discharge from construction sites	Erosion and Sedimentation Control workshop for developers, contractors, government officials	●	35 people attended	See <b>Appendix F</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Construction Site Runoff Continued	Reduce pollutant discharge from construction sites	Inspection of Jefferson County NPDES construction sites	●	6 NPDES permitted sites within calendar year	Bridge installation, spoils area, road work, borrow pit; See <b>Appendix F</b>
	Reduce pollutant discharge from sites	Complaint reporting application was utilized	●	577 NOV's were issued	See <b>Appendix B</b>
Public Education	Report activities	Activities pertain to all Permit Requirements	●	A Summary Graph was created to reflect the Education Activities	See <b>Summary Graph</b> below
Monitoring Program	Detect presence of illicit connections and improper discharges to the MS4	Dry Weather Screening	●	24 Instream sites sampled	See <b>Appendix H</b>
	Detect presence of illicit connections and improper discharges to the MS4	Wet Weather Screening	●	5 Instream sites sampled	See <b>Appendix H</b>
	Detect and eliminate discharges to the MS4	Wet Weather Investigative Monitoring	●	6 Investigation sites sampled	See <b>Appendix H</b>

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Monitoring Program Continued	Monitor pollutants in stormwater discharges to the MS4	Industrial and High Risk Runoff	●	Collected by industrial facilities	On file at ADEM office (Facilities governed by NPDES Permits submit info to ADEM)
	Dry weather screening	Screen MS4 outfalls	●	100% previously accomplished	

● =Yes

		Permit Requirements										
		Structural Controls	New Development & Redevelopment	Roadways	Flood Control Projects	PHF Storage & Application	Illicit Discharges & Improper Disposal	Spill Prevention & Response	Industrial/High Risk Runoff	Construction Site Runoff	Public Education	Monitoring Program
<b>Educational Initiatives</b>	Alabama Water Watch Chemical Workshops					X	X	X	X	X	X	X
	Boards, Committees, Stakeholder Groups	X	X	X		X	X	X	X	X	X	
	Brochures and Flyers	X	X	X	X	X	X	X	X	X	X	X
	Brown Bag Lunch and Learn Seminars	X	X	X		X	X	X	X	X	X	
	Calendar	X	X	X		X	X	X	X	X	X	
	Clean Water Awareness Campaign	X	X	X		X	X	X	X	X	X	

		Permit Requirements										
		Structural Controls	New Development & Redevelopment	Roadways	Flood Control Projects	PHF Storage & Application	Illicit Discharges & Improper Disposal	Spill Prevention & Response	Industrial/High Risk Runoff	Construction Site Runoff	Public Education	Monitoring Program
Educational Initiatives	Complaint Reporting Hotline Phone and Email	X	X	X	X	X	X	X	X	X	X	X
	Events	X	X	X	X	X	X	X	X	X	X	X
	Friends of Birmingham Botanical Gardens	X	X		X	X	X	X	X	X	X	X
	Jefferson County Water Festival	X	X	X	X	X	X	X	X	X	X	X
	Media	X	X	X		X	X	X	X	X	X	
	Monitor Slides	X	X	X		X	X	X	X	X	X	

		Permit Requirements										
		Structural Controls	New Development & Redevelopment	Roadways	Flood Control Projects	PHF Storage & Application	Illicit Discharges & Improper Disposal	Spill Prevention & Response	Industrial/High Risk Runoff	Construction Site Runoff	Public Education	Monitoring Program
Educational Initiatives	Newsletters	X	X	X		X	X	X	X	X	X	
	Pesticide, Herbicide, Fertilizer/Landscape		X			X	X	X	X		X	
	Posters: Floatables	X		X			X	X			X	
	Posters: Oil & Grease			X			X	X	X	X	X	
	Posters: Pesticides, Herbicides & Fertilizers			X		X	X	X		X	X	
	Posters: Pet Waste / Nutrients	X		X			X				X	

		Permit Requirements										
		Structural Controls	New Development & Redevelopment	Roadways	Flood Control Projects	PHF Storage & Application	Illicit Discharges & Improper Disposal	Spill Prevention & Response	Industrial/High Risk Runoff	Construction Site Runoff	Public Education	Monitoring Program
<b>Educational Initiatives</b>	Posters: Runoff Reduction	X	X	X	X						X	
	Posters: From Roof to Stream	X	X	X	X	X	X	X		X	X	X
	Posters: Erosion Prevention			X		X	X			X	X	
	Posters: Cooking Oil & Grease Recycling			X			X	X	X		X	
	Presentations	X	X	X	X	X	X	X	X	X	X	X
	Staff Development and Training	X	X	X	X	X	X	X	X	X	X	X

		<b>Permit Requirements</b>										
		<b>Structural Controls</b>	<b>New Development &amp; Redevelopment</b>	<b>Roadways</b>	<b>Flood Control Projects</b>	<b>PHF Storage &amp; Application</b>	<b>Illicit Discharges &amp; Improper Disposal</b>	<b>Spill Prevention &amp; Response</b>	<b>Industrial/High Risk Runoff</b>	<b>Construction Site Runoff</b>	<b>Public Education</b>	<b>Monitoring Program</b>
<b>Educational Initiatives</b>	Surveys	X		X		X	X	X	X		X	
	Turkey Creek Nature Preserve	X	X	X		X	X	X		X	X	X
	Website						X			X	X	

## **IV. Program Modifications**

## **PROGRAM MODIFICATIONS**

- The current Stormwater Program will be modified to align with the new Permit requirements that became effective October 1, 2018.

## **V. Fiscal Analysis of Permittees' Program**

The budgets from the Jefferson County Departments that have requirements that pertain to the MS4 NPDES Permit have been included. Please see Appendix I.