

JEFFERSON COUNTY COMMISSION

MUNICIPAL SEPARATE STORM SEWER SYSTEM

PERMIT NUMBER: ALS000001

ANNUAL REPORT FOR REPORTING PERIOD OCTOBER 1, 2018 TO SEPTEMBER 30, 2019

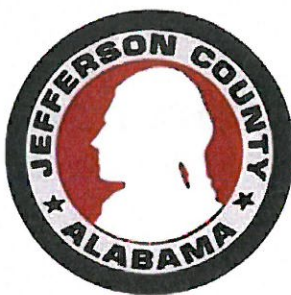
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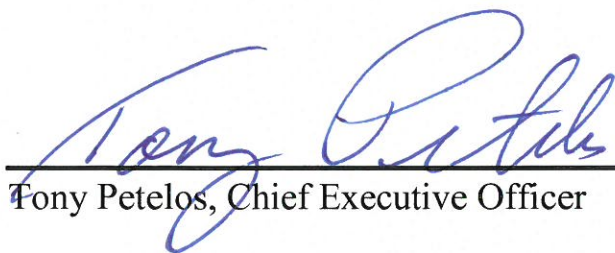
Tony Petelos, Chief Executive Officer

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



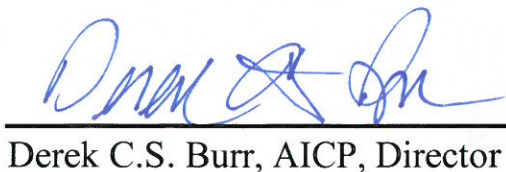


I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the 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 imprisonment for knowing violations (NPDES PERMIT ALS000001, PART V (K) dated September 27, 2018).


Tony Petelos, Chief Executive Officer

01-10-20

Date


Derek C.S. Burr, AICP, Director

January 2020

Date

**ANNUAL REPORT - Year One of Five
October 1, 2018 to September 30, 2019**

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I. General Information

A. CONTACTS

The Stormwater Program 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 collected, coordinated information from the various Jefferson County Departments for inclusion, and prepared this 2018-2019 Annual Report.

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

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II. Program Evaluation

A. PROGRAM OBJECTIVES

The requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit ALS000001 (Permit), issued by the Alabama Department of Environmental Management (ADEM), list specific responsibilities for the Permittee/Co-Permittees. The Stormwater Management Program (SWMP) is responsible for implementing the Stormwater Management Program Plan (SWMPP) within unincorporated Jefferson County, Alabama. The SWMP stipulates certain obligations that must be met in order for the Permittee to comply with the requirements of the Permit. The SWMP continued its work in accordance with the latest SWMPP that was submitted to ADEM during the 2018-2019 Permit Year. Work implemented by other County Departments which fulfills parts of the MS4 NPDES Permit requirements also is reported by the SWMP in its Annual Report. Please refer to **Appendix A** for the latest version of the SWMPP.

B. MAJOR FINDINGS

During the Permit Year October 1, 2018, through September 30, 2019, the following information was collected and evaluated as major findings that have impacted water quality:

- On April 10-11, 2019, representatives of the Alabama Department of Environmental Management's Stormwater Management Branch conducted an audit of Jefferson County's MS4 Phase I program for compliance with NPDES Permit ALS000001. A copy of the audit report is included in **Appendix N**.
- The Department of Development Services (DDS) was created through the merger of three departments: Inspection Services, Land Planning and Development Services, and Storm Water. DDS currently consists of four divisions which will continue to implement Jefferson County's Stormwater Program. The divisions are: Planning, Zoning and Enforcement; Building; Geographic Information Systems (GIS) and Addressing; 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 N** for the Organizational Chart.

- 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 five segments on the 303(d) list in the Black Warrior River basin are typically designated as impaired for chemical impairments such 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 two 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 N**.

**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.

- Jefferson County has selected 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.

The implementation of Accela moves the County departments away from paper process and siloed software systems that do not communicate toward an integrated platform that related Departments participate in and give the building community a means to monitor the progress of their plans through the approval process. Mobile applications improve productivity and communication and make comments and approvals by inspectors immediately available to staff in the office and the public. Automated notification as plans and applications move through approval steps and a web portal give 24-hour access to comments and the status of projects.

This platform provides flexibility for the County to implement online tools for application, plans submittal, fees payment and to request inspections and GIS integration will give the public new tools to identify activities in their neighborhood.

Accela Civic Platform will consolidate and simplify the permitting process and the County will gain efficiencies, employee resources, reduce wait times and provide better, more transparent, overall customer service.

Phase I of this project encompassed the development of planning records including rezoning, variance, subdivision approval and plat recording; floodplain and erosion control permits; licensing for contractors and individual trade records; enforcement records to track violations of the zoning, weed & litter and subdivision/stormwater ordinances; and included the setup of

the public-facing portal for each of these records to allow customers to apply, track, pay for, and search records in the system.

Phase II of this project (implementation projected to be completed in FY 2021) covers an upgrade to the newest version of the Accela product, additional residential and commercial New Construction and Alteration permit types and refinement of existing process. DDS will be implementing best practice for building permits aided by an implementation team from the software provider and the Accela library of best practice templates with the goal of creating a process that integrates stand-alone permits into one master application and workflow that guides a customer through all steps of the site construction process without needing to track individual permits. In this phase, the office will also identify opportunities for new targeted record types appropriate for discreet building permits, for example, creating a permit type for accessory structures separate from the new construction permit - as an accessory structure may not need the same review or inspections as new construction. Please see **Appendix O**.

C. MAJOR ACCOMPLISHMENTS

The following list outlines major accomplishments during the Permit Year October 1, 2018, through September 30, 2019 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 and inspects existing and newly constructed structural controls on an annual basis. It was reported that **2 inspections** were performed on structural controls with no follow up inspections required. As a result of these inspections, routine maintenance activities were performed during this Permit Year. Please see **Appendix B**.
- b. 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, **9,792.17 cubic yards** of material were removed from the storm sewer system. Please see **Appendix B**.
- c. The County's Roads and Transportation Department maintains the County's roadways. During this reporting period, **246 bags** and **579.50 tons** of trash was collected from along Jefferson County roadways. Please see **Appendix B**.
- d. During this reporting period, **5 fulltime employees** were assigned in the County's Roads and Transportation Department to pick up litter from along roadways in unincorporated areas of Jefferson County.
- e. The County's Roads and Transportation Department de-icing program was implemented by Camp Bessemer and Camp Ketona. A total of **218.70 tons** of sand was applied during this reporting period for ice control on County roadways. Please see **Appendix B**.
- f. 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. These calls initiate an investigation into the source and subsequent removal of the dumped materials. Please refer to Major Accomplishments, Public Education and Public Involvement (II.C.2) Major Accomplishments, Illicit Discharge Detection and Elimination (II.C.3), and see **Appendix C and D**.
- g. 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, Public Education and Public Involvement (II.C.2) and see **Appendix C**.
- h. The Stormwater Program staff continued to use 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, Public Education and Public Involvement (II.C.2).

2. Public Education and Public Involvement

Public Education and Public Involvement 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 Section III, Summary Table.

Stormwater Program staff created the Clean Water Awareness Campaign to inform, involve, and educate the public as well as affect behavioral change in order to reduce polluted stormwater runoff caused by the impacts of vehicle fluids, household hazardous waste, erosion and sedimentation, household cooking oil, prescription drug disposal, yard chemicals, pet waste, and litter. The campaign was designed to transcend the County's limited funds, non-contiguous 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 regarding 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 of the Clean Water Awareness Campaign. Additional communication mechanisms such as an e-newsletter, brochures, monitor slides, seminars / workshops and a 12-month printed calendar also were created and launched to provide a cost-effective way to support the posters and related components of the Clean Water Awareness Campaign.

Please see **Appendix C** for all Public Education and Public Involvement documents unless otherwise specified.

a. **Boards, Committees, Stakeholder Group, Partners**

Stormwater Program staff participate in and/or serve on **16 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 2018-2019: Alabama Partners for Clean Air, Alabama People Against A Littered State, 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 Gitters Committee, *Litter Quitters* Litter Abatement Video Competition Committee, Rain Barrel Workshop Committee, Valley Creek Cleanup Committee, Village Creek Human

and Environmental Justice Society, and US Army Corp of Engineers Valley Creek Flood Abatement Group.

b. Formalized Agreements

Stormwater Program staff intentionally partner with neighboring stormwater programs in and around the Jefferson County to enhance outreach, and reduce duplication of materials and expenses. Types of partnerships include watershed-based committees, events and communication materials. Local stormwater agencies include the City of Bessemer Stormwater Program, City of Birmingham Storm Water Management, City of Leeds, City of Hoover, Jefferson County Department of Health Watershed Protection Program and the Storm Water Management Authority.

The Stormwater Program entered into formal partnerships with local and state programs which were established by ongoing Memorandums of Understanding (MOU). The benefits of entering into MOUs include reducing expenses by sharing knowledge and resources, minimizing duplication of effort, enhancing the efficiency of stormwater pollution prevention outreach and involvement efforts, and expanding the reach of both agencies to improve stormwater quality. Please see **Appendix N** for copies of the MOUs.

- i. Alabama Cooperative Extension System (ACES). The Jefferson County Commission formalized an ongoing Memorandum of Understanding with the ACES which enhances the efforts of the Stormwater Division and ACES pertaining to environmental stewardship, with focus on providing trainings for lawn care industry certification in addition to educating the general public on water resources, conservation and water quality. ACES works collaboratively and / or in partnership on projects offered to students (Alabama 4-H, festivals and fairs), water quality and prudent yard care practice seminars offered to the public (rain barrel workshops, brown bag lunch and learns), water quality workshops showcasing proper Best Management Practices for land use offered to particular trades (lawn care industry, homebuilders), publications (posters, brochures, stormwater calendars), and proper disposal of household items (household hazardous waste and electronic collection events).
- ii. Alabama Environmental Council (AEC). The Jefferson County Commission formalized an MOU with AEC to promote, publicize, and facilitate the proper management and disposal of used oil, household hazardous wastes, electronics, batteries, and similar items thereby preventing these materials from being carried by stormwater into the storm drainage system and negatively impacting water quality in rivers, creeks, lakes and streams. AEC is a statewide organization which promotes environmental stewardship with focus on water resources.
- iii. Friends of Birmingham Botanical Gardens (FBBG). The Jefferson County Commission formalized an ongoing Memorandum of Understanding with the FBBG which enhances the efforts of the Stormwater Division and FBBG. The FBBG coordinated and administered various children's programs and adult classes during its past fiscal year ending in June 2019. More than 10,000 children and adults benefited from the FBBG education offerings which would not have been possible without the support of the 1,500 volunteers that gave a total of 21,00 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 FBBG co-hosts the Brown Bag Lunch and Learn Seminars and the Rain Barrel Workshops which are promoted to and attended by professionals and the general public.

- iv. Jefferson County Soil and Water Conservation District (JCSWCD). The Jefferson County Commission formalized an ongoing Memorandum of Understanding with the JCSWCD to enhance the public education and public involvement efforts pertaining to environmental stewardship, with focus on water resources, conservation and water quality. The JCSWCD works collaboratively and / or in partnership on projects, events, trainings, publications and other activities to include education fairs and programs offered to students (local water festivals for 4th grades, Urban Forestry Fairs for 5th graders, Litter Quitters offered to high schools), water quality seminars offered to the public (water monitoring, low impact landscaping practices), water quality workshops showcasing proper Best Management Practices for land use offered to particular trades (lawn care industry, homebuilders), publications (posters, brochures, stormwater calendars), and proper disposal of household items (household hazardous waste and electronic collection events). Through working committees, the JCSWCD spearheads the Litter Quitters High School Video Competition and is a co-host to the Rain Barrel Workshops.
- v. Turkey Creek Nature Preserve (TCNP). TCNP assists the Stormwater Program staff in achieving educational goals by including a stormwater education component in all student curriculums, community events and cleanups. TCNP also provides various opportunities to promote the Clean Water Awareness Campaign messages at its blog site, and in kiosks throughout the park. TCNP houses a recycling trailer for area residents to properly dispose of paper, aluminum and plastic.

c. **Communication Mechanisms / Advertisements**

Stormwater Program staff created and distributed various items to inform the public on the various targeted pollutants and their negative impacts on local water quality, how to report stormwater pollution, and techniques they can use to reduce their stormwater runoff. These items were distributed on social media, highlighted in the H2O Newsletters, displayed in holders at the front counter of the DDS, given out at events, workshops, presentations and other community meetings.

- i. **Brochures and Flyers.** The Stormwater Program staff distributed **12 various brochures and 7 flyers** to inform and educate the public about stormwater runoff, and to provide helpful tips and resources to improve water quality. During this permit year, 5 new brochures were created. These along with the 7 other brochures and 7 flyers are displayed at the County's DDS two front counters in brochure holders. A **Jefferson County Environmental Community Resource book** was finalized during this Permit Year. The Resource Book contains the services that various local stormwater programs, environmental agencies and other like-minded programs offered to the general public. This Resource Book is located on the Jefferson County website and other partnering agencies.

The brochures 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.

- a) **Good Housekeeping Brochure.** This brochure informs businesses of their responsibility to implement good housekeeping practices in order to prevent pollutants from entering the storm drainage system. Stormwater Program Staff received permission from Darren Lanier, Deputy Director Revenue Dept, to have information distributed to individuals applying for and/or renewing business licenses at the Main Courthouse as well as the Center Point, Gardendale, and Hoover satellite courthouse. Approximately **175 brochures per month** are distributed at these 4 locations.
- b) **Helpful Information Brochure.** This brochure provides an easy reference to services for residents of unincorporated Jefferson County. Included is an environmental section which provides contact information for proper household trash disposal and recycling; reporting illegal dumping and suspected water pollution; and reporting sanitary sewer emergencies.
- c) **Stormwater Pond Maintenance Brochure.** This brochure informs stormwater pond owner(s) of their responsibilities to inspect and maintain their stormwater pond. Included is a maintenance checklist.
- d) **Illegal Dumping.** This brochure informs residents of the negative health, safety and environmental impacts caused by illegal dumping. State and county code, ordinance, and enforcement references are cited. An illegal dumping reporting phone number and suspected water pollution reporting hotline phone number are included. Information about household hazardous waste events along with contact information for landfills and transfer stations which accept household trash, yard debris, household items, construction waste, and other materials is included.
- e) **Volunteer Litter Cleanup Program.** This brochure encourages residents not to litter while also encouraging them to organize and participate in a roadside litter cleanup. An overview of the steps involved in organizing a cleanup is provided. The negative health, safety and environmental impacts caused by litter are discussed and an illegal dumping reporting phone number and water pollution reporting hotline phone number are included.
- f) **Identifying and Reporting Water Pollution.** This brochure discusses how to identify illicit connections, illicit discharges, and illegal dumping, and the negative impacts these activities have on health, safety and water quality. A hotline phone number is provided for the public to report suspected water pollution.
- g) **Lawn & Garden Products, Yard Waste.** This brochure encourages the proper use of fertilizer, pesticide, and herbicides and explains their potential negative impacts on water quality if not correctly applied. The brochure also discusses the negative impacts of illegal dumping and advocates proper disposal of unwanted materials.

- h) **Preventing Stormwater Polluted Runoff.** This brochure provides an overview of the negative impacts of stormwater polluted runoff and the way in which everyday activities contribute to nonpoint source pollution. Specifically discussed are used oil, fertilizer, pesticide, herbicide, illegal dumping, and household hazardous waste. Proper disposal is encouraged, and the water pollution reporting hotline phone number is included.
- i) **Vehicle & Equipment Care & Maintenance.** This brochure discusses the potential negative impacts that improperly disposed or spilled motor oil and vehicle fluids can have on water quality. Good Housekeeping practices such as spill prevention, dry methods of spill cleanup, proper disposal or recycling, and preferred car washing procedures are provided. The water pollution reporting hotline phone number is included.
- j) **Let's Look at Sediment.** This brochure discusses the negative impacts to water quality that can result from erosion and sedimentation and encourages stewardship of land and water resources. Preventative measures are encouraged and a link to the Alabama Soil and Water Conservation Committee www.swcc.alabama.gov is provided.
- k) **Rain Rain Come Our Way.** This brochure illustrates the benefits of harvesting rainwater and encourages the installation of rain barrels on residential properties. The roles that impervious surfaces, rain gardens, groundwater, and surface water play in water quality is also discussed.
- l) **Fat Free Sewers.** This brochure discusses the negative impacts such as costly sewer overflows that household cooking oil and grease disposed into the sanitary sewer have on the County's sewer system and encourages residents to properly dispose or recycle these materials.

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 of the Subdivision Regulations), **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, Illicit Discharge Detection and Elimination (II.C.3), Major Accomplishments, Construction Site Storm Water Runoff control (II.C.4) and see Appendix C.

- ii. **Calendar.** A 12-month printed 2019 calendar was created in partnership with the City of Birmingham to provide a cost effective way to educate and inform 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 focused 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 the negative impacts that Wild Taro, *Colocasia esculenta*, is having on our local waterways and that this invasive plant is traveling through our local storm drain system. Helpful information on how to become more involved with the Wild Taro removal project was highlighted. The front and back of the calendar featured Vulcan Park with its iconic Vulcan statue. The Vulcan statue sits atop Red Mountain, which is part of the Red Mountain divide, a southern extension of the Appalachian Mountains and the Cumberland Plateau. Since this geological feature helps form our local watersheds, a map of Jefferson County was included to visually display the 2 major watershed basins (Black Warrior and the Cahaba), 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 the Vulcan statue faces the Black Warrior River Sub-Basin and the Cahaba Sub-Basin is behind him. A total of **3,000 calendars** were printed and distributed, with **1,500** of those distributed in unincorporated Jefferson County communities.

iii. **Media.** Various strategies have been implemented to utilize both traditional and new media.

- a) Jefferson County Commission has a Public Information Officer on staff whose job is to handle press releases, promotion of workshops / events and community activities in which the public can participate.
- b) As part of the Litter Quitters Video Competition, **2 live interviews were given, and 2 Print Ads and 1 television Public Service Message** were created. The Talk of Alabama interviews were held to promote the video competition. For Talk of Alabama, 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 9, 2019 was to introduce the Litter Quitter Project and to invite the viewers to go to the You Tube Channel to watch all the videos that were created. The second two segments aired on April 29, 2019 during which the students of the 1st place winning schools were interviewed, and their winning videos were shown.

ABC 33/40 created **2 Ads** for Facebook posts. One of the sponsored Ads, in support of this campaign, showed the 2 Talk of Alabama segments which originally aired on April 29th. Attached to both Ads was an article that summarized how *Littering is Stupid: That simple act of tossing your water bottle, food wrapper, or cigarette butt out of the car window is hurting you. Mostly in the wallet, but also in quality of life, safety, crime rate, and health. Bottom line, if you litter, stop doing it. If we all would take a few minutes to properly dispose of trash, this one action multiplied by millions of people every day would create an enormous economic benefit for everyone. Just think how*

an extra \$11.5 billion could be used for things that actually improve our lives. This sponsored Ad was featured on social media by ABC 33/40 and was listed at its web site.

All participating schools in the Litter Quitters competition were invited to be in a paid message that would air on local television stations. Financing for this message was provided by Santek Waste Services, Birmingham Zoo, Cawaco RC&D, City of Bessemer, City of Hoover, City of Leeds, and the Jefferson County Department of Health Watershed Protection Program. The paid message was created as an in-kind donation from Sinclair Broadcasting and was aired on ABC 33/40; WTTO-TV; MY68 between May 6 and June 16, 2019 with a hiatus week during Memorial Day (May 20-26). This same paid message was also used as a PSA on the same channels. There was no set schedule for the PSAs; they were run during prime time and in the middle of the night. The media awarded this message broad rotator bonus spots M-Su 5a-5a (7X per week). It was reported that the total television campaign delivered **221 messages and 3,774,300 impressions.**

- c) 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.
- d) 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.

iv. 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.

v. 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 more than **1,000 Jefferson County employees, 235 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.

Stormwater staff shared and promoted the Alabama IPM Communicator, a statewide newsletter filled with articles and publications from various accredited school researchers and Alabama Cooperative Extension personnel. The newsletter 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.

vi. **Posters**

A series of posters was created to serve as the flagship component of the Clean Water Awareness Campaign. During this reporting period, the look and content were updated, and several new posters were created. 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. Each poster lists the Stormwater Hotline number as well as Jefferson County's web site. A total of **36 posters** have been created since programs inception, but only 28 posters were reprinted onto foam core board during this Permit Year.

These posters are displayed at various locations throughout Jefferson County including permanent poster holders in the new DDS office area windows 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.

- a) ***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.
- b) ***Where does your water shed?*** This poster highlights the major creeks and significant watersheds / drainage basins of Jefferson County to include Black Warrior River, Cahaba River, Five Mile Creek, Gurley Creek, Litter Cahaba River, Shades Creek, Turkey Creek, Valley Creek and Village Creek. It was printed on a magnetic surface so that the public can place colored magnets on the map to indicate where they live and therefore locate in which watershed

they reside. The poster also defines the terms Basin, Sub-Basins and Watersheds.

- c) ***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
- d) ***Actions Matter!*** This **1 ‘call to action’ poster** visualizes 5 positive actions people can take that will help protect water quality, and 3 common negative actions that harm local water quality. It reminds the general public that pollution from motor oil, yard products, eroded soil, pet waste and litter harm our water quality.
- e) ***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 in public areas. 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.
- f) ***Household Oil and Grease Recycling.*** This program contains **8 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, promotes the positive results that can be achieved 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 Discharge Detection and Elimination (II.C.3).
- g) ***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.
- h) ***Reduce Runoff!*** This program contains **2 posters** that focus on stormwater polluted runoff and runoff reduction. The program informs people that water,

generated either by rain or irrigation, carries lawn chemicals, pet waste and vehicle fluids directly to creeks. One poster reminds people to direct downspouts and sprinklers to vegetation and not impervious surfaces. Another poster promotes the use of rain barrels to help reduce runoff.

- i) ***'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 residents that insecticides kill a wide range of insects, not just the pesky ones.
- j) **Storm Drain Systems.** This **1 poster** was created to illustrate the parts of the storm drain system and reinforce that the system was designed to transport rain water to the nearest waterbody with no treatment or trash removal. It also states that it is illegal to place anything in the storm drain system.
- k) ***Trash Blows! Trash Floats! Trash Litters!*** This floatable/litter abatement program contains **5 posters** that focus on people transporting trash, debris and other waste to landfills and intentionally discarding items out of vehicle windows. Intentional or not, items that blow out of vehicles become 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 as well as the direct implication of littering.

vii. **Website**

The Development Services Department was recently created from 3 separate departments. During this reporting period, work began to update and merge the content from the 3 departments' websites into 1 website which better reflects the new department (www.jccal.org/dsStormwater).

d. **Litter, Floatables And Debris Removal**

- i. 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 27 stamped inlet covers during this Reporting Period. Please see **Appendix B**.
- ii. 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, probationers were assigned by the Court to pick up litter from along roadways. While we normally receive a total of the number of bags collected, this year that number was not made available.

- iii. 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 2019 “**Don’t Drop it On Alabama**” statewide Spring Cleanup. PALS reports over **470.00 tons** of litter was collected to date statewide. In July of 2019, staff was invited and accepted to serve a three-year term on the PALS Board of Directors from 2019 – 2021.

In Jefferson County, **40 roadside cleanups** were held resulting in **619 volunteers** spending over **2,476 hours** picking up **39.08 tons** of litter along **142.05 linear miles** of roadways and out of ditches. Of those totals, **36 cleanups** were held along roadways in unincorporated areas of Jefferson County or that the Jefferson County R&TD maintains resulting in **368 volunteers** spending **1,472 hours** picking up **33.90 tons** of litter along **126.05 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 and C**.

Jefferson County was recognized at the Alabama PALS Governor’s Awards Program held on November 7, 2018 for its outstanding commitment in the areas of local cleanup efforts, environmental education and volunteerism. Jefferson County R&TD, Jefferson County Sheriff’s Office, Reverend Dr. Jonathan McPherson, Viola Broadnax, Regina Evans, Village Creek Human and Environmental Justice Society, Minor High School, Minor Middle School, Oak Grove High School Student Government Association, Pleasant Grove High School, Alpha Kappa Omega and Phi Gamma Rho Fraternity all received awards in their respective categories. These achievements were featured in the Alabama PALS Winter Quarter 2019 newsletter, *The PALS Prints Volume 39*.

On February 21, 2019, the Jefferson County Commission presented **9 Resolutions** to the PALS Community Award winners from Jefferson County. After the meeting the students were given a tour of various County Departments, the Criminal Justice system, the Metro Crime Center, and received an overview of future career opportunities with Jefferson County.

The Alabama PALS Winter Quarter 2019 newsletter, *The PALS Prints Volume 39*, featured roadside cleanups held throughout Jefferson County this past spring.

- iv. 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 **1,637 volunteers** spending over **6,548 hours** picking up **66.65 tons** of litter along **191.00 linear miles** of creek banks, bridge abutments, nearly roadways and ditches and out of the creeks themselves. Of those totals, **14 cleanups** were held in unincorporated areas of Jefferson County resulting in **731 volunteers** spending **2,924 hours** picking up **27.50 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**.

- a) 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 C and N**.
- b) 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 18, 2019**. It was reported that **12 volunteers** removed approximately **2.50 tons** of debris. The items collected during this event were placed in an onsite dumpster and hauled away with normal trash pickup.
- c) 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 16, 2019 and September 28, 2019** with three prior municipal work days to remove the heavier items on March 14, 2019, September 26, 2019 and September 27, 2019. These biannual 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.

For the Spring Biannual cleanup held on March 16, 2019, there were **6 volunteer site registration locations** for the volunteers. A total of **375 volunteers** removed **3.52 tons** of debris and **0.35 tons** of tires.

For the Fall Biannual cleanup held on September 28, 2019, there were 5 volunteer site registration locations for the volunteers. A total of **229 volunteers** removed **5.27 tons** of debris and **343** tires including 15 large truck tires.

- d) A total of **6 cleanups** were held along Village Creek resulting in **530 volunteers** removing **19.53 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 21, 2019, as part of the Hands on Birmingham Martin Luther King Jr. Day of Service Litter Cleanup Project, **277 people** came together and removed a total of **10.99 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 17 hosting / supporting organizations, 4 volunteer registration locations (Minor High School, Docena, Mulga Mines and Edgewater B), 4 communities (Adamsville, Docena, Mulga Mines and Edgewater B), 3 jurisdictions (City of Adamsville, City of Birmingham and Jefferson County Commission) and 2 local schools (Minor High School, Minor Middle School) which 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 Hands on Birmingham; Jefferson County Commission; Jefferson County Department of Health Watershed Protection Program; Minor Middle School; Minor High School; and Village Creek Human and Environmental Justice Society.

The March 23 event cleanup project was spearheaded by the Village Creek Human and Environmental Justice Society in conjunction with the University of Alabama's *Into the Streets* program. It was coordinated by a working committee with representatives from the Alabama People Against a Littered State (AL PALS), City of Birmingham, Jefferson County Commission, Jefferson County communities of Minor Heights and Edgewater B, Jefferson County Department of Health Watershed Protection Program, Storm Water Management Authority, Inc., Town of Maytown, Town of Mulga, University of Alabama Birmingham, along with the faith based community organizations such as First Baptist East Mulga, FOAM Ministries, Open Door, St. John's Baptist and Westmont Churches. 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. This project consisted of 2 volunteer registration locations, 5 communities, 5 faith-based organizations, and 4 jurisdictions coming together to pick up litter along roadways and ditches along Mulga Loop Road and Bayview Lake Bridge protecting the Village Creek Watershed from pollution. A total of **155 volunteers** removed **7.14 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.

As part of the *Renew Our Rivers* Program, the Village Creek Fall Cleanup was held on September 12-14, 2019. 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 12-14, 2019. 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 14, 2019. A total of **150 volunteers** from the local community, various schools and supporting partners removed **2.50 tons** of debris and trash.

- e) A total of **5 cleanups** took place along the Cahaba River. Reports show that **48 volunteers** removed **1.23 tons** of trash and tires. Details from each event is listed below.

Church of the Highlands, located along Grants Mill Road, spearheaded 5 roadsides cleanups to prevent litter and trash from entering the Cahaba River. One of the events was part of their Annual *Day of Service* project, the other five 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 October 2, **16 volunteers** picked up **0.32 tons** of litter; December 1, **4 volunteers** picked up **0.03 tons** of trash and tires; February 2, **2**

volunteers picked up **0.05** tons of litter; April 6, **9 volunteers** picked up **0.33 tons** of litter; and July 13, **17 volunteers** picked up **0.51 tons** of litter.

A Big Cahaba River Cleanup was scheduled for June 6, 2019. This event was spearheaded by the Cahaba River Society and included 7 cleanup sections stretching from the headwaters to Helena. While weather prevented this river cleanup from taking place, 3 weeks prior to the cleanup a massive education campaign about how litter impacts local waterways was released including a series of anti-litter radio advertisements in the metro area along with the first two installments in a series of short, educational videos about litter pollution. Public Service Announcements were promoted on social media and local radio stations.

- f) A total of **1 creek cleanup** was held along Shades Creek during this reporting period resulting in a total of **140 volunteers** removing **3.50 tons** of debris and tires.

On September 28, 2019, 140 volunteers removed 4 ½ heaping pickup truck loads (**3.50 tons**) of trash and tires during the 21st Annual Shades Creek Cleanup. Jefferson County Stormwater Program provided the trash bags, gloves and backpacks for this event.

- v. Stormwater Program Litter Quitters is anti-litter, stormwater-protection video competition that was launched in 2018 for public high schools located in Jefferson County, Alabama. It is aimed at young drivers, tasking them to produce up to a 60 second video to educate their family and friends about the negative impacts of litter on the local waterways and environment in general. Each participating school submits one video to the committee which reviews and approves the video. Videos are then loaded to a YouTube channel where the students hold a massive social media campaign to encourage the general public to watch their video on the YouTube Litter Quitters channel, and most importantly ‘like’ their video. The videos with the most ‘likes’ at the end of the competition win cash prizes.

Litter Quitters is a project that is spearheaded by the Jefferson county Conservation District in partnership with a working committee made up of the following organizations (listed in alphabetical order): City of Birmingham, City of Bessemer, City of Hoover, City of Leeds, Creative Directions, Inc., Freshwater Land Trust, Jefferson County Commission, Jefferson County Department of Health, Keep Birmingham Beautiful, and Storm Water Management Authority, Inc.

The 2019 Litter Quitters competition was open for 12 days starting April 10 and ending on Earth Day proper – April 22 at 11:59pm. In an effort to keep the schools engaged and focused on their local watersheds, the schools were divided into our 3 major watershed basins: North- Locust Fork; West – Valley Creek; and East – Cahaba. Each school competed for cash prizes against only the other schools in their watershed basin, thereby keeping the competition on a local level. All videos can be viewed on www.LitterQuitters.org. A total of **30 public high schools** were invited to participate in the competition. A Power Point presentation which included information about Jefferson County’s local waterways, litter and its negative impact on the environment along with competition details, was given to a

total of **764 students** from **23 schools**. Of these, 22 schools submitted videos into the competition.

As part of the 2019 project, participating schools were invited to send 1 student representative to take part in a professionally produced message / public service announcement that aired on local television. This paid message allowed the Litter Quitters Committee to market this anti-litter message to a broader audience – the general public – by using the voices of Jefferson County high school students to tell the message. A total of 10 schools participated in this message which was funded in part by the Cawaco RC&D and other organizations listed under the 2019 sponsors.

The ultimate goal of this project is to help high school students become change agents within their spheres of influence about the harmful issues that roadside litter causes across Jefferson County. This age group is vital to educate given they are the demographic which studies show are more likely to toss things out of vehicle windows. By providing them with information about the harmful negative impacts of litter to our waterways and environment they can exert influence on their peers, family and friends to properly dispose of their trash.

Litter Quitters winners won \$1,000.00 for 1st place; \$500.00 for 2nd place; \$250.00 for 3rd place. Since the competition was run concurrently in 3 watershed basins, there were a total of 9 winners. Winners were based on the number of ‘likes’ their video received on the YouTube Channel. During the 12-day competition, the YouTube Litter Quitters channel received 35,377 views.

The 2019 sponsors include the Litter Quitters Committee along with ABC 33/40 and affiliates, Birmingham Zoo, Black Warrior Riverkeeper, Cawaco RC&D, and Santek Waste Services. Their donations helped pay for the cash prizes, and the creation and airing of the Public Service Message.

A web site www.litterquitters.org housed educational material on the Litter Quitters project, watersheds and drainage basins, litter and its impacts on the environment was created. This website also linked to the Litter Quitter YouTube Channel (www.youtube.com/channel/UCZXJwztkliMIS2f7EF6Hffg) that housed the videos that were entered into the competition.

The 2019 winners of the video competition for the Northern area (Locust Fork Watershed) included 1st place Pinson Valley with 1,555 likes, 2nd place Mortimer Jordan with 1,462 likes, and 3rd place Tarrant with 808 likes. For the Eastern area (Cahaba Watershed) the winners included 1st place Shades Valley with 282 likes and 2nd place Leeds with 19 likes. For the Western area (Valley Creek Watershed) the winners included 1st place Oak Grove with 265 likes, 2nd place Wenonah with 266 likes, and 3rd place Parker with 218 likes.

There was also a Best Video Overall which was judged on the environmental content and the technical quality of the video. This was a County wide competition among all participating schools regardless of watershed they were in and the overall number of likes the videos received. This year the cash prize was \$250.00 which went to Tarrant High School. The prize was announced at Tarrant High School’s annual awards ceremony.

Pinson Valley, Oak Grove and Shades Valley High School students were featured on ABC33/40's Talk of Alabama program. The Jefferson County Commission presented the top three winning schools Resolutions for their achievements.

ABC 33/40 created **2 Ads for Facebook posts**. One of the sponsored Ads, in support of this campaign, showed the 2 Talk of Alabama segments which originally aired on April 29th. Attached to both Ads was an article:

Littering is stupid. That simple act of tossing your water bottle, food wrapper, or cigarette butt out of the car window is hurting you. Mostly in the wallet, but also in quality of life, safety, crime rate, and health. Bottom line, if you litter, stop doing it. If we all would take a few minutes to properly dispose of trash, this one action multiplied by millions of people every day would create an enormous economic benefit for everyone. Just think how an extra \$11.5 billion could be used for things that actually improve our lives. This sponsored Ad was featured on social media by ABC 33/40 and was listed at their web site.

All participating schools were invited to be in a paid message that would air on local television stations. Financing for this message was provided by Santek Waste Services, Birmingham Zoo, Cawaco RC&D, City of Bessemer, City of Hoover, City of Leeds, and the Jefferson County Department of Health Watershed Protection Program. The paid message was created as an in-kind donation from Sinclair Broadcasting and will be aired on broadcasting television on ABC 33/40; WTTO-TV; MY68 between May 6 and June 16, 2019 with a hiatus week during Memorial Day (May 20-26). This same paid message will also be used as a PSA on the same channels. There was no set schedule for the PSAs; they were run during prime time and in the middle of the night. The media awarded this message broadrotator bonus spots M-Su 5a-5a (7X per week). Total television campaign delivered **221 messages and 3,774,300 impressions**.

The aired message included students delivering the following statements:

Litter is...Dirty!

Litter is...Ugly!

Litter is...full of germs!

Litter can cause car wrecks!

Litter gets washed by rain into rivers and creeks.

Litter hurts fish, water and animals!

Litter costs a lot to clean up!

Littering is stupid!

e. 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 ACES, FBBG, AGITC and Green Industry Web Portal. Please refer to Major Accomplishments, Application of Pesticide, Herbicide, Fertilizers (II.C.8) and see **Appendix C and I**.

- i. 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 Memorandum of Understanding to comply with this Permit requirement. Please see **Appendix B, I and N**.
- ii. *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 makes available a biologic tool, *Bacillus thuringiensis israelensis* (Bti) tablets, to assist residents in managing mosquitos, 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.
- iii. Initiatives were implemented to have a positive effect on the amount and proper use 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 and in brochures and newsletters. Workshops and presentations about the proper use of and alternatives to chemicals were held locally and articles were published in local newspapers.
- iv. ACES, in partnership with other organizations, hosted a free monthly webinar as part of their *All Bugs Good and Bad* series. Presentations include information on the proper use and storage of chemicals including integrated pest management practices. These seminars were promoted at events, workshops, speaking engagements, and community-based meetings.

f. **Public Engagement and Public Involvement**

The Stormwater Program staff engaged and involved the public by encouraging them to call and report suspected pollution, offering materials at various public events, speaking to communities and civic groups and hosting and promoting storm water related seminars / workshops throughout the year. They are listed alphabetically below.

i. **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 including the backpacks volunteers use in local cleanup, education brochures, Clean Water Awareness posters, and is featured on the top left corner of every month in the Stormwater Calendar. Please refer to Major Accomplishments, Illicit Discharge Detection and Elimination (II.C.3).

ii. **Events**

The County's Stormwater Program information is generally displayed on a table or booth where the public can acquire information about the program, upcoming events and/or educational campaigns. Events tend to be a general audience where a wide variety of people congregate. Please see **Appendix C** unless noted otherwise.

- a) **Birmingham Zoo Annual Teacher Night Out.** On September 3, 2019, Stormwater Program staff, in partnership with ACES and the JCSWCD displayed and distributed materials at a booth during an event for local teachers. Alabama Water Watch's 4-H monitoring program, Litter Quitters High School Video Competition, Urban Forestry Festival and the Water Festival programs were promoted, and 2020 Stormwater Calendars were distributed. It was reported that **175 teachers** from local schools attended the event.
- b) **Do Dah Day.** On May 18, 2019, 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 approximately **20 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 **500 pet waste bags** and flyers were distributed. The Do Dah Day Board estimated that between **8,000 and 10,000 people** attended this event.

- c) **Earth Day at the Gardens.** On April 20, 2019, 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. In addition, a glass jar containing various common pollutants rainwater carries to local waterways during rain events was displayed and available for patrons to examine and shake to mix the contents. 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. JCSWCD 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. In addition to creating attractive artwork, the painting activity also taught children 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 **400 people** attended this annual event held at the Birmingham Botanical Gardens. Please see **Appendix C and N**.
- d) **Fishing Rodeo.** On June 8, 2019, the Clean Water Awareness Campaign posters were displayed at a booth along with a fun interactive activity for children at an event that was free and open to the public. Trash bags and information on the volunteer litter cleanup events were distributed. A visual display showcased how used motor oil and used cooking oil and grease can impact the environment when not disposed of properly. In addition, a glass jar containing various common pollutants rainwater carries to local waterways during rain events was displayed and available for patrons to examine and shake to mix the contents. 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. In addition to creating attractive artwork, the painting activity also taught children 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 **500 people** attended this annual event held at the East Lake Park.
- e) **Jefferson County Water Festival.** Stormwater Program staff serve on the festival committee that planned the Fifteenth Annual Jefferson County Water Festival to be held the week of May 13, 2019, at Samford University. Unfortunately, the venue was not available while the students could attend and therefore this event had to be rescheduled. The new date for this event is October 15, 2019. The Water Festival is geared to educate fourth grade students, teachers and parents from various schools from across Jefferson County 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 attend the Fishing Magicians magic show. All of the hands-on activities directly correlate with the Alabama Course of Science Study and SAT Objectives for fourth grade. Prior to the festival,

students from participating schools submit artwork depicting the Water Festival theme, Be A Water Hero, chosen for this year. The festival committee, spearheaded by the JCSWCD selects one winner whose artwork will be used as the Water Festival logo on free t-shirts distributed to participating students, teachers and volunteers.

- f) **National Neighborhood Night Out.** On August 6, 2019, the Water Pollution Reporting Backpacks were displayed and distributed at a booth along with bag of information on the Jefferson County Oil and Grease Program, compliant reporting, dog waste, vehicle fluids and yard chemicals. An estimated **200 people** attended this free event in Sylvan Springs.

iii. **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. Presentations are tailored to the specific audience; however, always include an overview of the Stormwater Program, various pollutants and their impacts to the environment, and how to report stormwater pollution. The presentations are listed in alphabetical order below.

- a) **Camp Fletcher.** Stormwater Program staff made **9 presentations** to **120 2nd, 3rd and 4th grade students** on April 11, May 3 and May 5th. Topics taught include the water cycle and the impacts of pollution, pollinators and their role with native wildflowers; fantastic filtration, litter, and other impacts common pollutants have on the environment and local water quality; and edible aquifer and how pollution can negatively impact drinking water.
- b) **Chalkville Trussville Garden Club.** Stormwater program staff made **1 presentation** at a monthly meeting on March 12, 2019 to **20 members**. A power point presentation was given on the impacts that stormwater has on local water quality, proper use and disposal of PHF and ways to reduce runoff and erosion. Brochures were distributed along with flyers promoting upcoming events, workshops, and seminars.
- c) **Erosion and Sedimentation Control (ESC) Workshops.** Stormwater Program staff made **1 presentation** at the ESC workshop held on April 16, 2019, 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.
- d) **Friends of Shades Creek Board of Directors Meeting.** Stormwater Program staff made **1 presentation** on September 5, 2019 to **8 Board members** about the Stormwater Program, resources available for the annual Shades Creek Cleanup, and the Litter Quitters High School competition. 2020 Stormwater Calendars were distributed as well as trash bags, back packs and gloves for the cleanup.

- e) **Grayson Valley Community Meeting.** On April 28th, a community meeting titled “Change Starts With Us – Coming Together, Working Together” was organized and held by a resident of the Grayson Valley Community in conjunction with a local church. The purpose of the meeting was to provide an opportunity for residents to learn about various resources and programs available to them, and to encourage them to become more involved in improving their community. While there were no attendees from the public, the resident, her family, and church pastor met and interacted with presenters. Stormwater Program Staff provided a presentation about the Clean Water Awareness Campaign which highlighted how individuals can help improve water quality and consequently quality of life through everyday behaviors and choices. Other presenters discussed workforce development opportunities, senior services, Neighborhood Watch and crime prevention, and home ownership.
- f) **Litter Quitters High School Video Competition.** A Power Point presentation which included information about Jefferson County’s local waterways, litter and its negative impact on the environment along with competition details, was given to **764 students** from **23 schools**. Of that total, **13 presentations** were given to 335 students by Jefferson County Stormwater staff. The schools included Clay-Chalkville (40); Minor (10); Mortimer Jordan (125); McAdory (35); and Oak Grove (125).
- g) **Minor High School.** Stormwater Program staff made **2 presentation** on January 21, 2019 as part of the Minor High School Volunteer Cleanup assembly to **54 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 encourage 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.

On March 6, a presentation to students was made during an outdoor classroom. Techniques on how to use the Alabama Water Watch kit were demonstrated to **100 students**.

- h) Stormwater program staff gave **8 presentations** to approximately **200 people** in various 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 on our local waterways and how these pollutants can be prevented. 2019 Stormwater calendars were distributed, and the pollution reporting number and the sanitary sewer overflow hotline numbers were emphasized. The meetings were held on October 18, 2018 (Rock Mountain Lakes Neighborhood Meeting); February 11, 2019 (Edgewater Oaks); February 13, 2019 (Village Creek Society); February 18, 2019 (Minor Heights Neighborhood Association; April 2, 2019 (Concord

Community Meeting); April 28, 2019 (Grayson Valley Community meeting); June 17, 2019 (Minor Heights Community Meeting); August 19, 2019 (Minor Heights Community Meeting).

- i) **UAB Center for Community Outreach Development (CORD) Summer Science Program.** Stormwater Program staff provided **3 educational presentations** (June 6, 2019; June 20, 2019; and July 11, 2019) 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 **47 students** attended the 6th Grade CORD Summer Camps.
- j) **Urban Forestry Fair.** On February 20, 2019, Stormwater Program staff provided **4 educational presentations** for **200 fifth grade students** from various schools within Jefferson County at the annual Urban Forestry Fair. The program projected 450 students to attend but with bad weather conditions only a few schools could attend, and all 6 outside activities were either cancelled or adapted for indoors. The interactive and engaging game, *We All Live In A Watershed*, is designed to reinforce the idea of conserving natural resources and improving water quality, and to show the various watersheds in Jefferson County and how they connect and flow to the Gulf of Mexico through Mobile Bay. Additionally, about 60 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.
- k) **Valley Creek Cleanup / Litter Quitter Video Competition Interview.** A total of **1 interview** was 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 16, 2019.

iv. **Workshops and Seminars**

Presentations directly related to the Stormwater Program NPDES requirements were made to specific audiences in various settings. Those in attendance have chosen to come and generally get more detailed information on a specific topic yet information on the entire stormwater program is often covered. Surveys and evaluations are typically administered post event and are considered when updating and modifying future content. They are listed in alphabetical order below.

- a) **Alabama Water Watch Chemical Workshops.** Stormwater Program staff coordinated and conducted **3 Alabama Water Trainings on October 22, 2018, November 28, 2018, and June 13, 2019** (Basic Water Chemistry; Chemistry Recertification) to **certify 12 and recertify 4 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.

- b) **Brown Bag Lunch and Learn Seminars.** Stormwater Program staff, in partnership with the FBBG, ACES, AGITC, 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 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 **762 participants** during this reporting period. The topics were: “Show Stoppers”, March 20; “Invasive Plants”, April 3; “Southern Favorites”, April 17; “Spatial Planting of Veggies”, May 1; “Organic Pest Control”, May 15; “Growing and Arranging Flowers for Indoor Displays”, May 29; “Seed Saving”, June 12; “Pollinators”, June 26; “Critters”, July 10; “Hire A Professional”, July 24; “Permaculture”, August 7; “Alabama Top Outdoor Spots”, August 21; and “Propagation”, September 4 and “Ask the Experts”, September 18, 2019.
- c) **Erosion and Sedimentation Control Workshops.** The County’s Stormwater Program assumes responsibility for hosting and coordinating an Erosion and Sedimentation Control (ESC) workshop on a rotational 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 **19 people** attended the **HBAA ESC Workshop** on April 16, 2019. 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 refer to Major Accomplishments, Construction Site Storm Water Runoff Control (II.C.4) and see **Appendix C and E**.
- d) **Rain Barrel Workshop.** 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, FBBG, City of Birmingham, City of Bessemer, Jefferson County Department of Health, JCSWCD, 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. Through various presentations on low impact development and green infrastructure practices, non-point source pollution, drip irrigation, runoff calculations and the basic ways to install rain collection systems including cisterns, the participants learned the benefits of capturing and storing rain water from their roof and how best to reapply the water in their yard. Jefferson County Household Oil and Grease Recycling Program containers and other items were distributed to all class participants and door prizes were awarded. The Committee publicized this event through flyers and social media. A post evaluation was given, and the results are included. The Committee members plan to offer more frequent Rain Barrel Workshops to the public in 2020 at various venues including one at the Birmingham Botanical Gardens on June 20, 2020.

g. Public Input and Evaluation

Public input was continuously sought through post event surveys, discussions during community-based meetings, events and presentations scheduled throughout this Permit Year. Input gathered will be considered during the revision of the next SWMPP.

- i. **Evaluations.** Feedback from participants in workshops and seminars is viewed as a product improvement opportunity to measure expectations from participants as it pertains to materials, program content, and delivery of information. All evaluation information received is taken into consideration when creating, updating and /or modifying various education materials and programs.
- ii. **Community forums.** The Warrior Planning and Zoning held **1 open house** located at Warrior Storm Shelter on April 2, 2019 as part of the Jefferson County Planning and Zoning Commission and Jefferson County to receive public input on the possible development of an industrial park and associated commercial development on both sides of I-65 at exit 280. The proposed development would be on what is known as the Hallmark Farm property. Since this change would require a modification of the County's Land Use Plan, the Planning and Zoning Commission participated in the Open House to receive comments on these plans. During this open house, presentations were made to the public on the overall project, impacts to roadways, traffic and the environment from runoff. It was reported that **62 people** attended and provided input to the proposed plan.
- iii. **SWMPP.** The SWMPP was made available for public comment on Jefferson County's website.
- iv. **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. Two 10-question online surveys to assess general stormwater pollution prevention and littering behavior have been created. Plans are being made to utilize Jefferson County's website and social media platforms to make these surveys available to the public and solicit their participation during the next reporting year. The information

collected will be used to evaluate the Stormwater Program's education efforts as required by the Permit.

h. Staff Development and Training

Opportunities are offered for County staff to earn certifications; affiliate with and join professional associations; and 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 **29 various training, staff development, and networking opportunities**. These events are in addition to the other events that have already been reported in other sections.
- 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 refer to Major Accomplishments, Pollution Prevention and Good Housekeeping for County Operations (II.C.7).

3. Illicit Discharge Detection and Elimination (IDDE)

- a. During this reporting period work began on identifying the number of outfalls that will need to be observed during dry weather conditions over the next five years. At current, a total of 39 outfalls have been identified with preliminary work done of the feasibility of accessing these structures safely. We anticipate inspecting 10 outfalls during the next permit year. Please refer to **Appendix D** for a complete list of outfalls identified in the first phase.
- b. There were no known updates to the MS4 maps during this Permit Year.
- c. Article 13 of Jefferson County's Subdivision and Construction regulations prohibits non-stormwater discharges to the MS4 and includes escalating enforcement procedures as well. This document is located on Jefferson County's DDS web site at the following location:
www.jccal.org/Sites/Jefferson_County/Documents/Land%20Development/Subdivision_Regs-100111.pdf. During this Permit Year, there were no enforcements.
- d. 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 website which is located at the County's website www.jccal.org/dsStormwater. The pollution reporting hotline contains a recorded message for residents calling after normal business hours. The message instructs the caller to leave enough detailed information so staff can investigate the complaint. The **hotline received 26 calls** during this reporting period. A total of **9 illicit discharges were investigated** as a result of calls to the Stormwater Hotline. Of the calls received, **3 lead to corrective actions** being taken while the other 6 calls were transferred to other appropriate agencies. Please refer to Major Accomplishments,

Public Education and Public Involvement (II.C.2) and see **Appendix D** for a complete list of calls, IDDE event locations including actions taken by staff.

- e. 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 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, **45 site investigations took place. These investigations resulted in 300 criminal littering cases** being opened. Of those opened cases, **51 cases were presented for citation**. A littering case includes a written notice of violation being sent to individuals whose names were collected during the process. Please see **Appendix D**.
- f. The County's DDS staff enforce Zoning and Floodplain regulations. During this Permit Year, **58 zoning violations, 218 weed and litter violations, and 0 floodplain violations** took place. Please see Appendix D.
- g. The Stormwater Program purchased Municipal Pollution Prevention training materials that include information on stormwater BMP's for illicit discharges, good housekeeping and targeted pollutants for various activities. 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. Please refer to Major Accomplishments, Pollution Prevention and Good Housekeeping for County Operations (II.C.7) and see **Appendix H** for a listing of the staff that viewed these videos.
- h. Information is distributed to individuals applying for and /or renewing business licenses at the Main Jefferson County Courthouse as well as the Center Point, Gardendale, and Hoover satellites. The information, in the form of a brochure, informs businesses of their responsibility to implement good housekeeping practices in order to prevent pollutants from entering the storm drainage system. Approximately **2,100 brochures** were distributed during this reporting period. Please see **Appendix D**.
- i. 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**.
- j. 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 residents 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 company. 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 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 **22 drop-off points** that accept filled containers for recycling, which reflects the addition of one new site since last year. A total of **5,257.00 gallons** was collected between October 1, 2018, and September 30, 2019.

The County's ESD distributed over **6,550 flyers** within apartment complexes, made **11 presentations**, provided **bilingual program materials** that were both displayed throughout the complexes and distributed to residents and held one media press 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 managers of apartment complexes. 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. Meetings were held with apartment complex managers and property management teams to discuss the ongoing grease issue in several complexes and what can be done to help. Please see **Appendix D and J**.

- 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, Public Education and Public Involvement (II.C.2).

4. Construction Site Storm Water Runoff Control

- 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. Article 13 explicitly requires effective practices from the most recent *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* published by the Alabama Soil and Water Conservation Committee referred to as the Alabama Handbook. The site plans review process includes verification the Alabama Handbook was used and includes consideration of water quality impacts. 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.
- b. During the Permit Year 2018-2019, the County's DDS staff issued Land Disturbance Activity Permits for **228 residential single-family homes** as part of its zoning approval process. A total of **64 exclusions for single family homes** which were exempt from Land Disturbance Permit requirements were issued. In addition, a total of **29 commercial** Land Disturbance Activity Permits and **8 commercial exclusions** were issued. Land Disturbance Activity Permits were issued to **1 government** construction

- project. A total of **1,403 construction site inspections** were made of which **193 failed inspections**. The sites that failed an inspection were sent a notice to correct the problem and re-inspected for compliance. Please see **Appendix E**.
- c. 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 and plans review process. Please see **Appendix E**.
 - d. The County's DDS has **8 staff** with current 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 completed a QCI training which included tools and strategies to help achieve and maintain compliance with the Stormwater Permit on all construction sites. The County's R&TD has **9 staff** with QCI certifications for linear road improvements, roadway construction, and bridge replacements. Please see **Appendix E**.
 - e. An annual education BMP training program is held for builders, contractors or land clearing professionals. This program is in partnership with the Alabama Homebuilders Association and other local stormwater programs. Class participants learn about proper erosion and sedimentation control, local ordinances and permitting requirements. Please refer to Major Accomplishments, Public Education and Public Involvement (II.C.2) and **Appendix C**.
 - f. The County's R&TD currently implements **3 NPDES permits** and **1 Underground Injection Control Permit** issued by ADEM to the County. Please see **Appendix E**.
 - 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. Major Accomplishments, Public Education and Public Involvement (II.C.2).

5. Post Construction Stormwater Management; New and Redevelopment

- a. DDS and R&T staff are currently in the process of creating a regulatory mechanism for qualifying new development and redevelopment projects within the timeframe specified in AL000001. It is anticipated that this mechanism will be created, approved and in place by October 2020.
- b. 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 redevelopment of older areas, to increase density in target areas and to reduce the discharge of pollutants into the MS4. This Ordinance was adopted by the County Commission on October 19, 2010. Please see **Appendix F**.
- c. Jefferson County's Subdivision and Construction Regulations, Article 13 Erosion and Sedimentation Ordinance includes Low Impact Development / Green Infrastructure practices. Practices from the Low Impact Development Handbook for the State of

Alabama published by the Alabama Department of Environmental Management, ACES and Auburn University are strongly encouraged during pre-construction meetings with landowners and developers. Please refer to Major Accomplishments, Construction Site Storm Water Runoff Control (II.C.4) and see **Appendix F**.

- d. During Permit Year 2018-2019, **106 subdivision cases, 41 rezoning cases, and 51 variances were approved**. Please see **Appendix F**.
- e. 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 areas impacted by these factors, 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. Additional plantings are proposed for the Concord Community once their newly established park plans are complete.
- f. During Permit Year 2018-2019, **1 public hearing** / open house was held on April 2, 2019 to discuss an Amendment to the Land Use Plan that would allow the development of an industrial park and related commercial development in an environmentally sensitive area of North Jefferson County. The meeting was attended by 62 area residents, and individual and group discussions were held on all aspects of the project. The overall public response was positive with chief concerns being the preservation of environmental features, views, and protection of residential areas. Please refer to Major Accomplishments, Public Education and Public Involvement (II.C.2).
- g. The Stormwater Program staff continued to use its 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, Public Education and Public Involvement (II.C.2).

6. Spill Prevention and Response

- a. For Permit Year 2018-2019, Jefferson County Emergency Management Agency (EMA) had the responsibility for spill prevention and response and responded to **73 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 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 including: paint, arts and craft products, pest control products, cleaners, and batteries.

These wheels are distributed at various public education events throughout the year. Please see **Appendix G**.

- b. 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. As a Fire Fighter, Hazardous Materials courses are required for the various staff that would handle hazardous materials. For example, Hazardous Materials Awareness and Operations instructs first responders in the basics of hazardous materials including recognition, protection, safety, and contacts in the case of the presence of hazardous materials. Hazardous Materials Technicians provide further training, including managing and preventing hazardous materials incidents. Hazardous Materials Incident Commander provides training for those individuals responsible for overseeing hazardous materials incidents. Please see **Appendix G**.
- c. On February 12, 2019, **56 Jefferson County employees** from **various** 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, conducted by Sigma Consulting and Training, Inc, 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 G**.
- d. The Stormwater Program staff continued to use its 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, Public Education and Public Involvement (II.C.2).

7. Pollution Prevention and Good Housekeeping for County Operations

- a. During this reporting period no facilities were added or removed. These facilities are inspected on a monthly basis and an example of a completed form is included in **Appendix H**.
- b. General Services is the Department that maintains various county facilities including parking areas, jails and satellite courthouses. The items collected were properly disposed by being placed in receptacles that included trash from other operations, so no exact tonnage is available to report. Henceforth Jefferson County will report the number of 50-gallon bags filled by the street sweeper.
- c. Jefferson County R&T has an established strategy and program for preventing and removing trash from the MS4 permitted area. The trash and debris collected are included in its annual tonnage report. Please refer to Major Accomplishments, Structural Controls (II.C.1) and see **Appendix B**.
- d. County Departments followed their Standard Operation Procedures set by the various Departments. These SOPs and their reports are maintained at the respective departments. This information is available upon request. A total of **2 inspections** were

performed during the 2018-2019 Permit Year. Please see **Appendix B** for the completed inspection forms.

- e. 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 BMP’s illicit discharges, good housekeeping and targeted pollutants for various activities. 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. A total of **24 staff** viewed these videos (Jefferson County Fleet Management staff on September 13, 2019 (17 staff trained at the Birmingham Shop) and September 25, 2019 (7 staff trained at the Bessemer Shop). Please refer to Major Accomplishments, Public Education and Public Involvement (II.C.2), Illicit Discharge Detection and Elimination (II.C.3) see **Appendix H**.
- f. A Fats, Oils and Grease (FOG) Inspector Training Workshop was held on May 16, 2019. A total of **9 Jefferson County staff** attended the training which included the FOG program staff, FOG inspectors as well as staff in other various County Departments. Please refer to Major Accomplishments, Oils, Toxics, and Household Hazardous Waste Control (II.C.9) and see **Appendix H**.
- g. During the 2018-2019 Permit Year, **2 Stormwater Program staff** completed the *Certified Stormwater Inspectors* training course. Please see Appendix H.
- h. The Stormwater Program staff continued to use its 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, Public Education and Public Involvement (II.C.2).

8. Application of Pesticide, Herbicide and Fertilizers

- a. 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 see **Appendix I**.

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 **36 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 I and N**.
- b. 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 **39 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 ACES, both partners of the GIW. Please see **Appendix I and N**.
 - c. 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 website (www.aces.edu/blog/topics/ipm-farming/alabama-ipm-communicator-newsletter/). 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 refer to Major Accomplishments, Public Education and Public Involvement (II.C.2) and see **Appendix C, I and N**.
 - d. Stormwater Program staff continued an Integrated Pest Management (IPM) program to responsibly control mosquitos and other bugs called ***Step Away From The Spray!*** *Bacillus thuringiensis israelensis* (Bti) tablets, 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 on publicly owned lands. 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, Public Education and Public Involvement (II.C.2) and see **Appendix C**.
 - e. Jefferson County Personnel Board certifies lists of perspective employees for the County. The JCPB required employees holding positions involving pesticides, herbicides and fertilizers obtain and maintain appropriate certifications as a condition of employment. The County has **12 staff** members who are certified PHF Applicators and hold a Certified PHF License. Please see **Appendix B**.

- f. Camp Ketona of the County's R&TD applied herbicides on **18,322 acres** of land by using **1,627.00 gallons of Hard Ball, 0.00 gallons of Milestone, 1,976.00 gallons of Target, 439.00 gallons of RoundUp, and 23 gallons of Trycera, 15.00 gallons of Rodeo Aquatic, and 0.85 gallons of Garlon.** Please see **Appendix B.**
- g. Camp Bessemer of the County's R&TD applied herbicides on **3,867 acres** of land by using **8.30 gallons of Hard Ball, 151.40 gallons of RoundUp, 14.30 gallons of Milestone, 912.90 gallons of MSMA, and 1040.40 gallons of 2-4-D.** Please see **Appendix B.**
- h. The County's General Services Department (GSD) maintains County owned properties such as the Satellite Courthouses. To prevent weeds in walkways and parking lots, the GSD applied a minimal amount of RoundUp and Hard Ball during the 2018 – 2019 Reporting Period. It was reported that no fungicide or fertilizer was applied during this time frame. Please see **Appendix I.**
- i. 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.
- j. The County's GSD followed its 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. Chemicals are stored in a secure area at the Operations Center. Please see **Appendix I.**
- k. 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 I.**
- l. 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, Public Education and Public Involvement (II.C.2).

9. Oils, Toxics, and Household Hazardous Waste Control

- a. 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 **975 batteries, 38.25 tons** of scrap metal, and recycled **29,445 quarts** of oil. Please see **Appendix J.**
- b. 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. www.jeffcoes.org/Default.asp?ID=26&pg=Customer+Care.

During this reporting period, **2,415 food service facilities** were permitted, and **2,208 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 **156 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 **12 employees** (program staff and inspectors) and offers training classes for food service facility employees to attend on a quarterly basis. Please refer to Major Accomplishments, Pollution Prevention and Good Housekeeping (II.C.7) and see **Appendix H**.

- c. A total of 4 Household Hazardous Waste Collection Days were held in various locations throughout Jefferson County. Reports show that **1,229 households** participated in these events which collected **almost 50.00 tons of paint, 1.81 tons of aerosols, 3.90 tons of yard chemicals**. Please see **Appendix J** for summaries of each event listed below.

On October 27, 2018, the City of Gardendale, Jefferson County Commission, and the Town of Warrior partnered to provide a Household Hazardous Waste Collection Day for residents of Gardendale, unincorporated Jefferson County, and Warrior at the Gardendale Civic Center on 857 Main Street in Gardendale. Approximately 146 vehicles representing **171 households** participated in the event. The following items were collected at the event: 1.69 tons of latex paint; 9.00 tons of flammable paints; 0.51 tons of aerosols; 0.30 tons of fertilizers; 0.40 tons of cleaners; 3.31 tons of electronics and 1.15 tons of batteries along with miscellaneous hazardous items such as fire extinguishers and smoke doctors. Other items such as motor oil, vehicle fluids,

tires, and used cooking oil were collected. Educational brochures on illicit discharges and proper vehicle maintenance were distributed to all vehicles and an intake survey was administered.

On April 27, 2019, the City of Bessemer, City of Birmingham and Jefferson County Commission partnered with the Jefferson County Department of Health and the Storm Water Management Authority, Inc. to provide a Household Hazardous Waste Collection Day at 3 various locations around Jefferson County. A live interview with a local television station was held to promote the event was held on April 18, 2019.

One site was located at the Bessemer Public works Laydown Yard on 15th Avenue North in Bessemer. Approximately 88 vehicles representing **116 households** participated in the event. The following items were collected at the event: 4.00 tons of paint and solvents; 18.50 tons of non-hazardous waste, 0.30 tons of aerosols; 1.28 tons of fertilizers and other toxic chemicals; 1.77 tons of electronics along with miscellaneous hazardous items such as fire extinguishers and smoke detectors. Other items such as motor oil, vehicle fluids, tires, and used cooking oil were collected. Educational brochures on illicit discharges and proper vehicle maintenance were distributed to all vehicles and an intake survey was administered.

A second site was in Fairfield at 7100 Aaron Aronov Drive. **Approximately 215 households** participated in the event. The following items were collected at the event: 5.0 tons of paint and solvents; 0.24 tons of aerosols; 0.59 tons of pesticides; 3.80 tons of electronics along with miscellaneous hazardous items such as fire extinguishers and smoke detectors. Other items such as motor oil, vehicle fluids, tires, and used cooking oil were collected. Educational brochures were distributed to all vehicles and an intake survey was administered.

A third site was in Irondale at the Habitat for Humanity ReStore, 7952 Crestwood Boulevard. Approximately **727 households** participated in the event. Items collected included 30.24 tons of paint and solvents; 0.77 tons of aerosols; 1.73 tons of pesticides; 4.32 tons of electronics along with miscellaneous hazardous items such as fire extinguishers and smoke detectors. Other items such as motor oil, vehicle fluids, tires, and used cooking oil were collected. Educational brochures were distributed to all vehicles and an intake survey was administered.

- d. A combined total of **7.61 tons of electronics** were collected from 2 Electronic and Battery Takeback Day events held for residents in the unincorporated areas of Jefferson County. Reports show that **137 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 circumvent the improper disposal of electronics and batteries. Details from each event are listed below. Please see **Appendix J**.

On July 27, 2019 an event was held at the Adamsville Walmart parking lot. A total of **28 households** participated in the event. Additional partners with this event include the City of Birmingham, Jefferson County Department of Health, Keep Birmingham Beautiful and Storm Water Management Authority, Inc. A total of **1.40 tons** of electronics were collected.

On August 10, 2019 an event was held at the Jefferson County Center Point Satellite Courthouse. A total of **109 households** participated in the event. Additional partners with this event include the City of Birmingham, Jefferson County Department of Health, Keep Birmingham Beautiful and Storm Water Management Authority, Inc. A total of **5.76 tons** of electronics were collected.

- e. 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 is a statewide nonprofit which promotes the proper disposal and recycling of various items. AEC created and promotes Recycle Alabama through its website (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 if not properly secured. 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.2) and see **Appendix J and L**.
- f. Stormwater Program staff promoted **2 National Prescription Drug Take-Back Events** held in the Jefferson County area on **October 27, 2018** and **April 27, 2019**. 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. Almost **6.0 tons** of medication were collected statewide during these events according to the Drug Enforcement Administration (2.53 tons October 2019 and 3.40 tons April 2019). 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 J**.
- g. 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 J**.
- 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, Public Education and Public Involvement (II.C.2).

10. Industrial Storm Water Runoff

- a. Jefferson County owns **3 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 currently 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 located in Mount Olive at 101 Barber Parkway, Gardendale, AL 35071 (ALG 890326). Stormwater program staff conducted inspections of the 3 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 K**.
- b. The Fire Departments within Jefferson County are responsible for conducting Pre-Fire inspections initially, followed by routine and compliance inspections, and spill response at facilities reporting under SARA Title III, Tier II in unincorporated Jefferson County. Area Fire Departments have SOPs for the inspections that include identification of hazardous materials and verification of each facility's Spill Prevention Containment and Countermeasures (SPCC) Plan. Part of the plan specifies that fire departments are notified when an industrial site receives a shipment of hazardous material. Stormwater Staff worked with Emergency Management Agency and fire stations within Jefferson County's area to modify the pre-fire plan check list to include an acknowledgement of conveying information regarding potential sources of stormwater pollution.
- c. The County's R&TD implemented **2 NPDES Industrial Permits** issued by ADEM to the County. Please see **Appendix B**.
- d. A presentation was given to the Birmingham Environmental Professionals Association on April 5, 2019 regarding the permitting, reporting and training requirements for Conditionally Exempt Small Quantity Generators of Hazardous Waste. Please see **Appendix K** for the sign-in sheet.
- e. 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, Public Education and Public Involvement (II.C.2).

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. Furthermore, the climate during the year was not conducive for collecting all planned samples, much like that of years past. Jefferson County experienced severe weather, tornados, and flooding for days on end, all adverse events that created dangerous conditions for personnel. When the continuous wet weather subsided, drought maladies ensued. According to The Drought Monitor, Jefferson County and much of Alabama experienced drought conditions for the majority of the Permit period. One after another, meteorologists, statistics, and news reports documented weather extremes statewide. **Appendix L** 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. 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. Please refer to Major Findings (II.B.4) and Future Direction (II.E.5).
- 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 7, 2018 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, Reverend Jonathan McPherson, Village Creek Human and Environmental Justice Society, Inc., Viola Broadnax, Regina Evans-Barrentine, Pleasant Grove High School, Alpha Kappa Omega Heats Sorority, Phi Gamma Rho Fraternity and the Jefferson County R&TD all received awards in their respective categories. Please see **Appendix C**.
- The Alabama PALS Summer Quarter newsletter, *The PALS Prints Volume 39*, featured roadside cleanups held throughout Jefferson County this past spring. Please see Appendix C.
- 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 Major Findings (II.B.4) and Future Direction (II.E.5).

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, City of Bessemer, Jefferson County Department of Health and the Stormwater Management Authority, Inc on a 12-month 2020 calendar which will be printed and distributed during the 2019-2020 Permit Year. The calendar features Low Impact Development (LID) / Green Infrastructure (GI) Practices that assist with the reduction of stormwater leaving a site during a rain event. Each month, a LID/GI practice has been highlighted in either a commercial (large scale) or in a residential (small scale) setting. These practices emphasize water conservation and the use of various features to collect, store and filter the rain into the ground to prevent runoff. A poster was created for the center fold of the calendar that highlights an infographic showing how stormwater runoff ends up in the local creeks. It also shows various parts of the storm drainage system and common pollutants that enter the stormwater drainage system. The intent of this calendar is to encourage people to use the various LID / GI techniques to reduce the volume and velocity of stormwater runoff as well as protect our local creeks and streams from pollution. Please see **Appendix N**.
- Further discussions will be held with the Jefferson County Department of Health's Watershed Protection Program, City of Bessemer, City of Birmingham, City of Leeds, and other appropriate entities in an effort to identify and collaborate on opportunities for Jefferson County residents to properly dispose of Household Hazardous Waste on a regular basis for free or at a reduced cost. These discussions may also 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.
- Phase II of the Accela Civic Platform Project will cover an upgrade to the newest version, additional residential and commercial New Construction and Alteration permit types and refinement of the existing process. DDS will be implementing best practice for building permits aided by an implementation team from the software provider and the Accela library of best practice templates with the goal of creating a process that integrates stand-alone permits into one master application and workflow that guides a customer through all steps of the site construction process without needing to track individual permits. In this phase the office will also identify opportunities for new targeted record types appropriate for discreet building permits, for example, creating a permit type for accessory structures separate from the new construction permit - as an accessory structure may not need the same review or inspections as new construction. Please refer to Major Findings (II.B.4) and Program Strength and Weaknesses (II.D.7).
- The County's DDS continues updating and improving its webpages, located within the Jefferson County website (www.jccal.org/ds) 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.
- In transitioning to the new Accela software platform Jefferson County found the violation escalation activity information was not separated from the current platform's configuration.

Phase II of Accela will integrate the differentiation between escalating activities such as Stop Work Orders and Cease and Desist Orders.

III. Summary Table

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|----------------------------------|---|--|---|---|-----------------------------------|
| Structural Controls | Operate the MS4 and structural controls to reduce pollutant discharge | Maintenance and inspection performed | Implemented | 2 inspections and maintenance activities performed on structure controls | Appendix B |
| | Operate the MS4 and structural controls to reduce pollutant discharge | Material removed from storm sewer system | Implemented | 9,792.17 cubic yards removed from ditches | Appendix B |
| | Operate and maintain to minimize MS4 to remove pollutants | Refuse, litter, and debris removal | Implemented | Roads and Transportation Department removed 246 bags and 579.50 tons of trash from roadside | Appendix B |
| | Operate and maintain to minimize pollutants | De-icing activities | Implemented | Jefferson County applied 218.70 tons of sand on as-needed basis | Appendix B |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---------------------------------------|---|--------------------------------------|---|---|-----------------------------------|
| Public Education / Public Involvement | Inform and involve groups with the Stormwater Program | Partners / formalized agreements | Implemented | Participation in 16 partnering organizations with 5 formalized Agreements in form of Memorandum of Understandings | Appendix C and N |
| | Communication mechanisms and advertisements | Printed and electronic materials | Implemented | 800 brochures distributed; 3,000 stormwater calendars distributed; 38 monitor slides were displayed; 4 quarterly newsletters; 36 posters displayed; 1 website | See Appendix C |
| | Structural controls to reduce pollutant discharge | Stormwater inlet covers | Implemented | 34 stormwater inlet covers stamped | See Appendix B |
| | Individual participation in litter removal activities | Litter, floatable and debris removal | Implemented | 86.06 tons of litter was removed from Unincorporated Jefferson County roadways and waterways in 70 Cleanups by 1,534 volunteers | See Appendix C |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---|--|--|---|--|-----------------------------------|
| Public Education / Public Involvement Cont. | Inform and involve the public on litter reduction and removal | <i>Litter Quitters:</i> public high school anti-litter video competition with television ads | Implemented | 764 students from 23 schools attended Litter Quitters PowerPoint Presentation, YouTube Litter Quitters channel received 35,377 views during 10 day competition, 3 Talk of Alabama segments; 2 paid Facebook advertisements; 221 television messages and 3,774,300 television impressions | See Appendix C |
| | Inform and involve the public on stormwater pollution prevention | Complaint reporting, community events, presentations, workshops and seminars | Implemented | 6 events with approximately 9,275 people; 43 presentations were given to 984 people; 19 workshops and seminars were held with 839 attendees | See Appendix C |
| | Public input and evaluation | Evaluations, community forums, and surveys | Implemented | 1 public hearing / open house held, 62 area residents attended; | See Appendix C |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---|---|---|---|---|-----------------------------------|
| Public Education / Public Involvement Cont. | Inform and involve staff on stormwater topics | Staff development and training | Implemented | Staff participated in 29 various training opportunities to further knowledge | See Appendix C |
| Illicit Discharge Detection and Elimination | Detect and eliminate illicit discharges | Dry weather outfall monitoring | In Progress | 39 outfalls identified | See Appendix D |
| | Detect and eliminate illicit discharges | Investigations and enforcement proceedings for IDDE | Implemented | 26 hotline calls and email notifications were received; 9 illicit discharges investigated, 3 corrective actions taken | See Appendix D |
| | Detect and eliminate illicit discharges | Investigations and enforcement proceedings for illegal dumping, zoning and weed and litter violations | Implemented | 45 site investigations; 300 criminal littering cases, 51 cases were presented for citation; 58 zoning violations, 218 weed and litter violations, and 0 floodplain violations | See Appendix D |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---|--|---|---|--|-----------------------------------|
| Illicit Discharge Detection and Elimination cont. | Detect and eliminate illicit discharges | Good Housekeeping brochures distributed to businesses | Implemented | Approximately 2,100 brochures distributed to individuals applying for or renewing business licenses | See Appendix C |
| | Detect and eliminate illicit discharges | SSO reporting | Implemented | Complete listing of SSO and actions taken by staff | See Appendix D |
| | Detect and eliminate illicit discharges | Household used oil and grease recycling | Implemented | 22 drop off points with a 5,257.00 gallons of used cooking oil and grease were collected; distributed 6,550 flyers within apartment complexes and made 11 presentations about program; 1 media conference held | See Appendix D |
| Construction Site Storm Water Runoff Control | Reduce pollutant discharge from construction sites | Inspection of land disturbing activities and BMPs | Implemented | 258 Land Disturbing Permits were issued; 29 Commercial permits, 228 Residential permits, and 1 Government permit | See Appendix E |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|--|--|--|---|--|-----------------------------------|
| Construction Site Storm Water Runoff Control | Reduce pollutant discharge from construction sites | Inspection of land disturbing activities and BMPs | Implemented | 72 Exclusions were issued; 8 Commercial exclusions and 64 Residential exclusions | See Appendix E |
| | Reduce pollutant discharge from construction sites | Inspection of land disturbing activities and BMPs | Implemented | 1,403 construction inspections were performed; 193 failed inspections | See Appendix E |
| | Reduce pollutant discharge from construction sites | Staff training as Qualified Credentialed Inspector (QCI) | Implemented | 8 DDS staff certified; 9 R&TD staff certified | Appendix E |
| | Reduce pollutant discharge from construction sites | Inspection of Jefferson County NPDES construction sites | Implemented | 3 NPDES Permitted sites and 1 Underground Injection Control Permit | Appendix E |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|--|---|--|---|--|-----------------------------------|
| Post Construction Stormwater Management; New and Redevelopment | Reduce pollutant discharge from developed sites | Minimize pollutants after construction is complete | Implemented | 106 subdivision cases, 41 rezoning cases, and 51 variances were approved | Appendix F |
| | Assess impacts on water quality | Land use plan | Implemented | 1 public hearing / open house held, 62 area residents attended | Appendix F |
| Spill Prevention and Response | Prevent, contain, and respond to spills | Conduct spill response | Implemented | EMA responded to 73 spills | Appendix G |
| | Spill and response training | Conduct spill response | Implemented | 56 staff trained on chemical response and containment | Appendix G |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---|---|---|---|--|-----------------------------------|
| Pollution Prevention and Good Housekeeping | Prevent and reduce discharges from Country operations | Implement controls for trash and debris | Implemented | Trash and debris were collected and discarded in receptacles that included trash from other operations, so no exact tonnage is available to report | n/a |
| | Prevent and reduce discharges from Country operations | Implement inspections at fueling facilities | Implemented | 72 inspections were performed | Appendix H |
| | Prevent and reduce discharges from Country operations | BMP pollution prevention training | Implemented | 24 staff attended BMP video trainings; 9 staff attended FOG training; 2 staff became Certified Stormwater Inspectors | Appendix H |
| Application of Pesticide, Herbicide, and Fertilizer | Reduce pollutant discharge related to storage and application | Training in safe use, storage and disposal | Implemented | 36 events promoted by AGITC; 39 events promoted by GIW; 12 staff hold a Certified PHF License | Appendix B and I |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---|---|--|---|---|-----------------------------------|
| Application of Pesticide, Herbicide, and Fertilizer | Reduce pollutant discharge related to storage and application | Implement controls for discharge and storage | Implemented | Chemicals are stored in secure, climate-controlled warehouses. Inspections took place but not quantified | Appendix I |
| | Reduce pollutant discharge related to storage and application | Implement controls for discharge and storage | Implemented | 6,208.15 gallons of herbicides were applied along 22,189 acres (Camp Ketona applied 4,080.85 gallons; Camp Bessemer applied 2,127.30 gallons; General Services applied minimal gallons) | Appendix B and I |
| | Reduce pollutant discharge related to storage and application | Implement controls for discharge and storage | Implemented | No fertilizer was reported to have been applied | n/a |
| Oils, Toxics, and Household Hazardous Waste Control | Identify and control pollutants in stormwater discharges | Jefferson County Fleet Management in-house recycling program | Implemented | 975 batteries were recycled; 29,445 quarts of motor oil were recycled; 38.25 tons of scrap metal were recycled | Appendix J |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|---|--|---|---|---|-----------------------------------|
| Oils, Toxics, and Household Hazardous Waste Control | Identify and control pollutants in stormwater discharges | Jefferson County Grease Control Program for food service facilities | Implemented | 2,415 food service facilities were permitted, 2,208 annual site inspections, and 156 sites were non-compliant | Appendix H |
| | Detect and eliminate discharges to the MS4 | Household Hazardous Waste collection event for public | Implemented | 4 locations held, 1,229 households participated. See Appendix for quantities of items collected. | Appendix J |
| | Detect and eliminate discharges to the MS4 | Electronic and battery take-back collection event for public | Implemented | 2 events held, 137 households participated; 7.61 tons of electronics, were collected | Appendix J |
| | Detect and eliminate discharges to the MS4 | National prescription drug take-back event | Implemented | 2 national events held; nearly 6.00 tons of medication was collected statewide | Appendix J |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|----------------------------------|---|---|---|--|-----------------------------------|
| Industrial Storm Water Runoff | Identify and control pollutants in stormwater discharges | Inspection of industrial and high-risk runoff sites | Implemented | 1 landfill and 2 transfer station inspections conducted; 2 NPDES Industrial Permitted sites; 0 SARA Title III, Tier II | Appendix K |
| Monitoring Program | Detect illicit connections and improper discharges to the MS4 | Dry weather screening | | 18 Instream sites sampled | Appendix L |
| | Detect illicit connections and improper discharges to the MS4 | Wet weather screening | | 2 Instream sites sampled | Appendix L |
| | Detect and eliminate discharges to the MS4 | Wet weather investigative monitoring | | 2 Investigation sites sampled | Appendix L |

| <i>Element of Program</i> | <i>Requirement</i> | <i>Activities</i> | <i>Status: In Progress / Implemented</i> | <i>Status Results of Activities During Current Permit Year</i> | <i>Comments / Appendix</i> |
|----------------------------------|---|--|---|--|-----------------------------------|
| Inspections and Enforcement | Weed, litter, criminal littering and zoning | Complaint reporting application was utilized | Implemented | 45 site investigations; 300 criminal littering cases, 51 cases were presented for citation; 1,573 zoning approvals issued, and 276 violations issued for zoning, weed and litter, floodplain | Appendix D and F |
| | Land Disturbance Activity Permits | Erosion and sediment control permits / exclusions issued | Implemented | 258 Land Disturbing Permits; 72 Exclusions | Appendix E |
| | Land disturbance activity inspections | Erosion and sediment control inspection activities | Implemented | 1,403 construction inspections were performed; 193 failed inspections reported | Appendix E |
| | Subdivision and Construction | Subdivision and Construction Regulation | Implemented | 114 subdivision cases, 41 rezoning cases, and 51 variances were approved | Appendix F |

| | | | | Permit Requirements | | | | | | | | | |
|-------------------------|--|---|-----------|---------------------|---|--------------------------|---------------------------------------|-----------------------------|--|---------------------------|---------------------|-----------------------------|--------------------|
| | | Type of Public Education Public Involvement | Frequency | Structural Controls | Illicit Discharge Detection Elimination | Construction Site Runoff | Post Construction New & Redevelopment | Spill Prevention & Response | Pollution Prevention Good Housekeeping | PHF Storage & Application | Oils, Toxics, & HHW | Industrial/High Risk Runoff | Monitoring Program |
| Educational Initiatives | Complaint Reporting Hotline Phone and Email | Public Engagement / Public Involvement | Ongoing | X | X | X | X | X | X | X | X | X | X |
| | Events | Public Engagement / Public Involvement | Ongoing | X | X | X | X | X | X | X | X | X | X |
| | Friends of Birmingham Botanical Gardens | Partners | Ongoing | X | X | X | X | X | | X | | X | X |
| | Jefferson County Water Festival | Public Engagement / Public Involvement | Annually | X | X | X | X | X | X | X | | X | X |
| | Litter, Floatables and Debris Removal: Volunteer Cleanups | Litter, Floatables, Debris Removal | Ongoing | X | X | X | X | X | X | X | X | X | |
| | Litter, Floatables and Debris Removal: Video Competition (Litter Quitters) | Litter, Floatables, Debris Removal | Annually | X | X | X | X | X | X | X | X | | X |
| | Media | Communication Mechanism / Advertisement | Ongoing | X | X | X | X | X | X | X | X | X | |

| | | | | Permit Requirements | | | | | | | | | |
|-------------------------|---|---|-----------|---------------------|---|--------------------------|---------------------------------------|-----------------------------|--|---------------------------|---------------------|-----------------------------|--------------------|
| | | Type of Public Education Public Involvement | Frequency | Structural Controls | Illicit Discharge Detection Elimination | Construction Site Runoff | Post Construction New & Redevelopment | Spill Prevention & Response | Pollution Prevention Good Housekeeping | PHF Storage & Application | Oils, Toxics, & HHW | Industrial/High Risk Runoff | Monitoring Program |
| Educational Initiatives | Monitor Slides | Communication Mechanism / Advertisement | Ongoing | X | X | X | X | X | X | X | X | X | |
| | Newsletters | Communication Mechanism / Advertisement | 4 x year | X | X | X | X | X | X | X | X | X | |
| | Pesticide, Herbicide, Fertilizer/Landscape | PHF / Landscape | Ongoing | | X | | X | X | X | X | X | X | |
| | Posters: Floatables | Communication Mechanism / Advertisement | Ongoing | X | X | | | X | X | | X | | |
| | Posters: Oil & Grease / Vehicle Fluids | Communication Mechanism / Advertisement | Ongoing | | X | X | | X | X | | X | X | |
| | Posters: Pesticides, Herbicides & Fertilizers | Communication Mechanism / Advertisement | Ongoing | | X | X | | X | X | X | X | | |
| | Posters: Pet Waste / Nutrients | Communication Mechanism / Advertisement | Ongoing | X | X | | | | X | | X | | |

| | | | | Permit Requirements | | | | | | | | | |
|-------------------------|---|---|-----------|---------------------|---|--------------------------|---------------------------------------|-----------------------------|--|---------------------------|---------------------|-----------------------------|--------------------|
| | | Type of Public Education Public Involvement | Frequency | Structural Controls | Illicit Discharge Detection Elimination | Construction Site Runoff | Post Construction New & Redevelopment | Spill Prevention & Response | Pollution Prevention Good Housekeeping | PHF Storage & Application | Oils, Toxics, & HHW | Industrial/High Risk Runoff | Monitoring Program |
| Educational Initiatives | Posters: Runoff Reduction / Low Impact Development | Communication Mechanism / Advertisement | Ongoing | X | | X | X | X | X | X | X | | |
| | Posters: From Roof to Stream, Watersheds, Storm Drain Systems | Communication Mechanism / Advertisement | Ongoing | X | X | X | X | X | X | X | X | | X |
| | Posters: Reporting Pollution, Actions Matter | Communication Mechanism / Advertisement | Ongoing | X | X | X | X | X | X | X | X | X | X |
| | Posters: Erosion Prevention | Communication Mechanism / Advertisement | Ongoing | | X | X | | | X | X | | | |
| | Posters: Cooking Oil & Grease Recycling | Communication Mechanism / Advertisement | Ongoing | | X | | | X | X | | X | X | |
| | Presentations | Public Engagement / Public Involvement | Ongoing | X | X | X | X | X | X | X | X | X | X |
| | Staff Development and Training | Staff Development and Training | Ongoing | X | X | X | X | X | X | X | X | X | X |

| | | | | Permit Requirements | | | | | | | | | |
|-------------------------|--|---|------------------|---------------------|---|--------------------------|---------------------------------------|-----------------------------|--|---------------------------|---------------------|-----------------------------|--------------------|
| | | Type of Public Education Public Involvement | Frequency | Structural Controls | Illicit Discharge Detection Elimination | Construction Site Runoff | Post Construction New & Redevelopment | Spill Prevention & Response | Pollution Prevention Good Housekeeping | PHF Storage & Application | Oils, Toxics, & HHW | Industrial/High Risk Runoff | Monitoring Program |
| Educational Initiatives | Surveys | Public Input and Evaluation | Result Dependent | X | X | | | X | X | X | X | X | |
| | Turkey Creek Nature Preserve | Partners | Ongoing | X | X | X | X | X | | X | | X | X |
| | Website | Communication Mechanism / Advertisement | Ongoing | X | X | X | X | X | X | X | X | X | X |
| | Workshops: Erosion and Sediment Control, Rain Barrel LID /GI | Public Engagement / Public Involvement | Annually | X | X | X | X | X | X | X | X | | |

IV. Monitoring Section

Monitoring and Reporting

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 on the following waterbodies: Five Mile Creek, Shades Creek, Turkey Creek, Valley Creek, and Village Creek. The sampling location in Five Mile Creek is off Coalburg Rd (33.59806, -86.86801) and the landuse is characterized by undeveloped and low density residential. The sampling location is within the Hydrologic Unit Code (HUC) 12 Upper Five Mile Creek watershed basin and is composed of 40,858 acres. The Shades Creek sampling site is off Dickey Springs Rd (33.32568, - 86.94914) with landuse characterized predominantly as undeveloped, agricultural, with a few light industrial areas. The HUC12 watershed basin size is 44,458 acres. Two sites on Turkey Creek are monitored. One is within the Jefferson County Water Reclamation Facility property near Narrows Rd (33.70938, -86.69634) and the landuse is largely characterized as undeveloped, agriculture, low density residential, and recreation. The watershed basin size is 31,330 acres. The second site is located near Doss Hollow Rd (33.75665, -86.8254) having similar landuse characteristics as the first. Although samples are collected from Turkey Creek proper, it falls in the Cunningham Creek watershed basin that is 23,442 acres in size. The sampling site on Valley Creek is below the Lock 17 Rd bridge (33.44738, -87.12154) and the landuse upstream is characterized as mostly undeveloped, low density residential, and heavy industrial associated with large mining tracts. The HUC12 watershed basin for this site is 34,369 acres. The location of the Village Creek site is near Minor Pkwy (33.5479, -86.92603) with the most diverse landuse of all the sites. The basin consists of low-density residential, medium-density residential, high-density residential, light industrial, heavy industrial, with fewer undeveloped areas. The site is within the HUC12 Upper Village Creek watershed basin which is 44,319 acres in size. A map of the sampling locations is provided in **Appendix L**.

Jefferson County continued to implement the monitoring program established in the SWMPP as weather permitted. During Permit Year 2018-2019, Stormwater Program staff collected instream samples for wet and dry weather screening and investigation sampling. This information is summarized and quantified in the Summary Tables. The raw data analyses along with graphical charts, to include the current reporting period along with the past five years is included in **Appendix L**. Narrative Field Data Sheets completed at the time of sample collection are available upon request. The laboratory analyses for the parameters were performed in accordance with 40 CFR Part 136 as required by Permit ALS000001. Establishment of trends in stormwater pollutant concentrations depends on a vast amount of water quality data. There were fewer wet weather samples collected compared to dry weather samples due to inclement weather as mentioned in the Program Strength and Weaknesses section of this report. Moreover, there were many instances where a graph could not be created due to the analyses being below measurability. The analytical results were graphed for each monitoring location and a trendline was formulated to interpret the results. Except for Five Mile Creek, total suspended solids during wet weather decreased in the other four creeks indicating water quality improvement over time. There were instances in Valley Creek and the upper Turkey Creek site where the pH exceeded water quality standards for the ADEM Fish and Wildlife use classification. As expected, nitrate and phosphate analyses were slightly elevated during periods when fertilizers are applied.

Jefferson County has two creeks with approved TMDLs. The Shades Creek TMDLs apply to pathogens, siltation, and habitat alteration, while the Village Creek TMDLs apply to metals, siltation, pathogens, and habitat alteration. Analysis of fecal coliform in Shades Creek indicated

there was one instance of elevated colonies during this reporting year and including the past five-year period. The siltation, measured in total suspended solids, declined during both dry and wet weather sample collections over a six-year period that indicate water quality improvement. With the exceptions of aluminum and strontium, Village Creek sustained a decrease in concentrations of metals. Total suspended solids in Village Creek during dry weather showed consistent concentrations over time and decreased in wet weather samples. Pathogens, measured by fecal coliform colonies, demonstrated improving water quality. Future pathogen measurements will be for E. coli as this parameter is the indicator for water quality standards in the designated use classifications.

V. Stormwater Management Plan / Program Modifications

PROGRAM MODIFICATIONS

- Work will continue on the Post Construction Permit regulations with an implementation date of October 2020.
- Stormwater Program staff will explore ways in which modifications and improvements can be made to the Good Housekeeping Training Program.
- Work will continue with EMA and the local Fire Departments on establishing the Pre-Fire Plan Check List to include an acknowledgement of conveying information regarding potential sources of stormwater pollution.
- Currently, the items collected from the maintenance of county facilities including the parking areas, jails and satellite courthouses are properly disposed by being placed in receptacles that included trash from other operations, so no exact tonnage is available to report. Henceforth, Jefferson County will report the number of 50-gallon bags filled by the streetsweeper.

VI. Inspection and Enforcement

- a. The County's Development Services Department issued **1,573 zoning approvals** and received complaints related to weed and litter, criminal littering, and zoning violations. During this reporting period, **276 notices of violation** (58 zoning, 218 weed and litter) were investigated. Please see **Appendix D and F**.
- b. During the Permit Year 2017-2018, the County's DDS staff issued Land Disturbance Activity Permits for **228 residential single-family homes** as part of its zoning approval process. A total of **64 exclusions for single family homes** which were exempt from Land Disturbance Permit requirements were issued. In addition, a total of **29 commercial** Land Disturbance Activity Permits and **8 commercial exclusions** were issued. Land Disturbance Activity Permits were issued to **1 government** construction project. Please see **Appendix E**.
- c. A total of **1,403 Erosion and Sediment Control Inspection activities** were performed for the Land Disturbance Activity permitted sites with **193 failed inspections** during the Permit Year 2018-2019. This number includes escalated failed site inspections where written notices with corrective actions on failed site visits to include Stop Work Orders and Cease and Desist Orders. Complaints associated with permitted sites are handled through site inspections. Please see **Appendix E and M**.
- d. A total of **45 criminal littering site investigations** took place. These investigations resulted in **300 criminal littering cases being opened**. Of those opened cases, 51 cases were presented for citation. A littering case includes a written notice of violation being sent to individuals whose names were collected during the process. Please see **Appendix D**.

VII. Public Education

The implementation status of the Public Education and Public Involvement program is included in Education Summary Table located in Section III.

VIII. 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 N**.