

JEFFERSON COUNTY COMMISSION

MUNICIPAL SEPARATE STORM SEWER SYSTEM

PERMIT NUMBER: ALS000001

ANNUAL REPORT FOR REPORTING PERIOD OCTOBER 1, 2019 TO SEPTEMBER 30, 2020

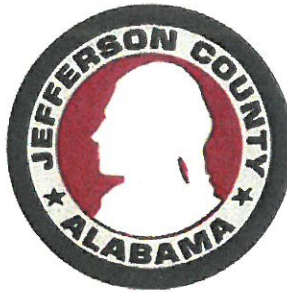
Jefferson County Commission

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Commissioner Steve Ammons
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Commissioner Shelia Tyson

Tony Petelos, Chief Executive Officer

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





I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations (NPDES PERMIT ALS000001, PART V (K) dated September 27, 2018).

Tony Petelos

Tony Petelos, Chief Executive Officer

1/25/21

Date

Derek C.S. Burr

Derek C.S. Burr, AICP, Director

22 Jan 2021

Date

**ANNUAL REPORT - Year Two of Five
October 1, 2019 to September 30, 2020**

TABLE OF CONTENTS

I. GENERAL INFORMATION

A. Contacts

II. PROGRAM EVALUATION

A. Program Objectives

B. Major Findings

C. Major Accomplishments

D. Program Strength and Weaknesses

E. Future Direction

F. Effectiveness of SWMPP

G. Actions not Accomplished

III. NARRATIVE REPORT

A. Summary Table

B. Public Education Implementation Status Table

C. Proposed Revisions / Modifications

IV. MONITORING SECTION

A. Status

B. Analysis

C. Interpretation

V. STORMWATER MANAGEMENT PROGRAM PLAN

VI. INSPECTION AND ENFORCMENT SUMMARY

VII. PUBLIC EDUCATION

VIII. FISCAL ANALYSIS OF PERMITTEE'S PROGRAM

IX. APPENDICES

- A. Stormwater Management Program Plan
- B. Structural Controls
- C. Public Education and Public Involvement
- D. Illicit Discharge Detection and Elimination
- E. Construction Site Storm Water Runoff Control
- F. Post Construction Stormwater Management; New and Redevelopment
- G. Spill Prevention and Response
- H. Pollution Prevention/Good Housekeeping
- I. Pesticides, Herbicides, and Fertilizers
- J. Oils, Toxics, and Household Hazardous Waste Control
- K. Industrial Storm Water Runoff
- L. Monitoring
- M. Inspections and Enforcement
- N. Budgets; Organization Chart; Major Findings; Memorandum of Understanding
- O. Strength and Weakness; Future Direction

I. General Information

A. CONTACTS

The Stormwater Program staff of the Jefferson County Commission, under the supervision of Tony Petelos, Chief Executive Officer, are responsible for all the County Department functions and responsibilities, and Derek C.S. Burr, Director of Development Services Department, collected and coordinated information from various Jefferson County Departments for inclusion and prepared this 2019-2020 Annual Report.

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

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II. Program Evaluation

A. PROGRAM OBJECTIVES

The requirements of the Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) 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 must be met 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 2019-2020 Permit Year. Work implemented by other County Departments that 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, 2019, through September 30, 2020, 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**.
- According to the final 2020 water quality 303(d) list of ADEM and the EPA, seven 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, such as 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. There are original stream segments 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,
- Black Creek for pH.

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

- Jefferson County has selected Accela Civic Platform to provide the County’s planning, permitting, inspections, plans review, and code enforcement services toward a web-based, technology-driven solution. This web-based transition improves service delivery, efficiently process building permits, leverage mobile capabilities for field staff, and streamline approvals for new construction.

The implementation of Accela moves the Department of Development Services away from paper processes towards an integrated platform. Mobile applications improve productivity, communication, comments, and approvals by inspectors and make them immediately available to staff in the office and the customer. Accela also provides automated notifications as plans and applications move through the workflow and a web portal gives 24-hour access to comments and the status of projects.

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

Phase II was an upgrade to the newest version of the Accela product, additional residential and commercial permit types, and refinement of existing processes. DDS implemented best practice for building permits with the goal of creating a process that integrates stand-alone permits into a combo permit and workflow that guides a customer through all steps of the site construction process without needing to track individual permits.

Phase III includes additional automation and fee updates.

- A structural control device used to collect litter floatables was installed as a three-month pilot project in Valley Creek. Funds for this Litter *Gitter* were obtained by a grant that was spearheaded by the Freshwater Land Trust in partnership with many other organizations including the Jefferson County Stormwater Program. Please refer to Major Accomplishments, Structural Controls (II.C.1) and see **Appendix B**.
- The COVID-19 pandemic had a significant impact on the education and outreach programs, volunteer litter cleanup programs, scheduled workshops, and the high school anti-litter video competition. Many speaking presentations and community events that were planned and funded had to be cancelled. Please refer to Major Accomplishments, Public Education and Public Involvement (II.C.2) and see **Appendix C and N**.

C. MAJOR ACCOMPLISHMENTS

The following list outlines major accomplishments during the Permit Year October 1, 2019, through September 30, 2020 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 **two 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. R&TD maintains the storm sewer system within unincorporated Jefferson County rights-of-way. During the reporting period, **9,280.13 cubic yards** of material were removed from the storm sewer system and another **2,288.74 tons and 3,406.00 cubic yards** of storm debris was removed. Please see **Appendix B**.
- c. R&TD maintains the County's roadways. During this reporting period, **105 bags and 267.41 tons** of trash was collected from along Jefferson County roadways. Please see **Appendix B**.
- d. During this reporting period, **three fulltime employees** were assigned in R&TD to pick up litter from along roadways in unincorporated areas of Jefferson County. Please see **Appendix B**.
- e. The R&TD de-icing program was implemented by Camp Bessemer and Camp Ketona. A total of **20.00 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) that 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 reporting period, 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 MOUs 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. During the reporting period, a structural control device to collect floatables was installed as a 90-day pilot project in Valley Creek. Funding from River Network and a grant from the Coca-Cola Foundation helped to make it possible. This project was spearheaded by the Freshwater Land Trust in partnership with many other organizations including the Jefferson County Stormwater Program. Reports indicate that **0.07 tons** of litter were collected during the trial phase that started on December 5th 2019 and ended on February 29th 2020. From December 5th through 31st 2019, a

total of **37.98 pounds/49.50 cft** of litter was removed from Valley Creek of which **17.94 pounds/20.50 cft** was recycled. In January 2020, **41.82 pounds/48.00 cft** of litter was removed of which **16.14 pounds/19.50 cft** was recycled. In February 2020, **67.97 pounds/79.50 cft** litter was removed of which **26.11 pounds/34.00 cft** was recycled. Please see **Appendix B**.

- i. Freshwater Land Trust and partners were awarded a \$500,000 EPA Trash Free Waters Program Grant over a three-year period. The major goal of the funded project is to remove trash in or about to enter waterways, specifically local creeks, and rivers in the greater Birmingham area. This EPA grant will also supplement the existing Litter Quitters Anti-Litter Video Competition education program. The Valley Creek Pilot Litter Gitter along with five other sites will have the device installed. Jefferson County is one of the seventeen project partners. Please see **Appendix B**.
- j. City of Homewood installed a Litter Gitter in Griffin Creek off Broadway Street during this reporting period. This device will assist in reducing the amount of litter in Shades Creek, which flows through the unincorporated areas of Jefferson County. Please see **Appendix B**.
- k. 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 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, educate the public, and affect behavioral change 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.

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. 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 Jefferson County in identifying key community contacts to potentially serve Jefferson County as change agents regarding stormwater pollution prevention. The community contacts have assisted Jefferson County 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 **15 various boards, committees, and stakeholder groups** 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 2019-2020: Alabama Partners for Clean Air, Alabama People Against A Littered State, Alabama Stormwater Association, Birmingham Botanical Garden Brown Bag Lunch and Learn 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 Jefferson County to enhance outreach and reduce duplication of materials and expenses. Partnerships include watershed-based committees, events, and communication materials. Local stormwater agencies include: City of Bessemer Stormwater Program, City of Birmingham Stormwater 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 formal partnerships with local and state programs which were established by ongoing Memorandums of Understanding (MOU). The benefits of entering 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 public on water resources, conservation, and water quality. ACES works collaboratively 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. Friends of Birmingham Botanical Gardens (FBBG). The Jefferson County Commission formalized an ongoing MOU with the FBBG that 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 2020. Even with the COVID-19 Pandemic, 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 **18,000 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 public.
- iii. Jefferson County Soil and Water Conservation District (JCSWCD). The Jefferson County Commission formalized an ongoing MOU 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 and 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. The JCSWCD works collaboratively 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 Anti-Litter Video Competition and is a co-host to the Rain Barrel Workshops.
- iv. Turkey Creek Nature Preserve (TCNP). TCNP assists 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 on 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 JeffCo H2O Newsletters, displayed in holders at the front counter of DDS, given out at events, workshops, presentations and other community meetings and are located on Jefferson County's website for viewing:

(<http://www.jccal.org/Default.asp?ID=2022&pg=Community+Outreach>).

- i. **Brochures and Flyers.** The Stormwater Program staff distributed **12 various brochures and seven flyers** to inform and educate the public about stormwater runoff and to provide helpful tips and resources to improve water quality. During this reporting year, **12 brochures and seven flyers** were displayed at the County's DDS front counters in brochure holders. Preliminary work was done with the County's Information Technology (IT) Department to ultimately make this and other brochures and flyers available to the public via Quick Response (QR) codes. The goal is to reduce the use of paper materials and provide a means for stormwater pollution prevention and other related information that reside on the DDS webpage to be readily available to the public via their cell phones. The ability to track the number of views each item receives and when those views occurred was created and implemented by IT staff effective February 28th 2020. A total of **153 downloads** of various brochures and flyers were made from the Jefferson County Stormwater website page during this reporting period. Please see **Appendix C** for a listing of these downloads.

A **Jefferson County Environmental Community Resource Book** was updated during this reporting year. The Resource Book contains the services that various local stormwater programs, environmental agencies and other like-minded programs offer to the public. This Resource Book is located on the Jefferson County website. 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 to prevent pollutants from entering the storm drainage system. Stormwater Program Staff received permission from Darren Lanier, Deputy Director Revenue Department, to distribute information to individuals applying for and/or renewing business licenses at the Main Courthouse and CenterPoint, Gardendale, and Hoover satellite courthouses. A supply of **175 brochures** per month is provided to the Revenue Department for distribution at these four locations. Due to COVID-19 pandemic, the main Courthouse and its satellites were closed to the public March 17th 2020 and reopened on May 1st 2020. This brochure was not distributed to the public between March 17th 2020 and May 11th 2020.
- 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, illegal dumping, and the negative impacts these activities have on the 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 us 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 2020 Stormwater 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 regarding 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 Stormwater 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. 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. A total of **5,000 Stormwater 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, **two live interviews were given, and three digital ads, one print article, and one television public service message** were created. The first segment which aired on April 24th 2020 was to introduce the Litter Quitter Project and to invite the public to go watch and vote for their favorite video on the Litter Quitters website. The second segment aired on May 6th 2020 during which the teacher at the 1st place winning school was interviewed, and their winning video was shown.

Participating schools were invited to be in a paid message that would air on local television stations. Financing for this message was provided by Drummond Company, Inc, American Cast Iron Pipe Company, 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 WBRC-TV including BOUNCETV, wbrc.com and other digital platforms. The “Littering is Stupid” Campaign, which included the airing of the message and an interview about the competition, was to take place on Earth Day April 22nd 2020. Because of inclement weather it was postponed two days launching on April 24th 2020. The message aired for eight weeks ending on June 14th 2020. The air schedule on WBRC-TV included Good Day Alabama, early news, late news, and weekend programs. In addition, the campaign was given bonus spots that aired as PSA’s on WBRC-TV and BOUNCE-TV. To engage the high school and college students, streaming spots aired on Roku, Amazon Fire TV, and Apple TV. Reports show the “Littering is Stupid” Campaign delivered **4,917,800 impressions** (a total count of the number of views a message received based on Nielson data for adults over 18 years old). A total of **195 paid commercials aired** with a 93.9% reach (the percentage of people viewing television who saw the message during the campaign) with a frequency of **4.1** (the average times each viewer saw the message). There were **58,461 takeover performances**, the banner ad on the WBRC website homepage that people could click on to go to the LQ page and vote. This ad was on their home page for an entire week. The campaign received **30,601 impressions delivered** on the other digital platforms to include Roku, the WBRC news app and/ or the pre-roll video on the WBRC website.

Since roadway litter comes from trash being intentionally tossed out of vehicles, a billboard campaign along major roadways were launched to bring about awareness that litter is, well, stupid! The digital billboards campaign started on Earth Day, April 22nd 2020 ending on May 27th 2020. The billboards which displayed the “Littering is Stupid” message was located along I-65 Northbound and I-65 Southbound at Oxmoor Road and along Richard Arrington Boulevard at Vulcan Park. Reports show **96,790 flip adds** were shown with over **2.1 million impressions delivered**. The Committee paid for **33,000 flips** and Mashburn Outdoor sponsored the remaining **63,790 flips**.

The Jefferson County Commissioners presented the Litter Quitters winners Resolutions of Achievement on July 9th 2020 at a Commission meeting. Commissioner Tyson presented Ramsay High School’s and Commissioner Scales presented Woodlawn High School’s resolution. Carver High School was

not able to attend the meeting but still received their resolution by the Commission.

The Birmingham Times published an article on June 27th 2020, titled “Area students combat littering across Birmingham metro.” The online article received **1,370 views** by July 1st 2020. The public was encouraged to view the videos and the public service message:

<http://www.birminghamtimes.com/2020/06/area-students-combat-littering-across-birmingham-metro/>.

- c) As part of the volunteer roadside litter cleanups, **two live television interviews** and **one radio interview** were given. On February 27th 2020, the Mulga Loop Road Cleanup was promoted on ABC 33/40 Talk of Alabama. On March 11th 2020, the Valley Creek Cleanup was promoted on **three segments of Good Day Alabama with Jeh Jeh Pruitt on FOX 6**. On March 12th 2020, the Valley Creek Cleanup was promoted and discussed during the morning Gary Richardson show on WJLD radio.
- d) On November 26th 2019, a television press conference was held to promote the County’s Household used cooking oil and grease program to remind those frying turkeys on Thanksgiving how to properly dispose of their used frying oil. Information from the news conference was aired on **two local television stations** during the Thanksgiving holidays and parts of the story were shared on the County’s Facebook and Instagram accounts. WBRC reports **1,412,802-page views with 90,246 unique visitors**. WIAT-CBS reports **Nielsen Audience of 12,132**.

In addition, **two paid articles** were featured with local media. Birmingham Times featured a paid article online and in print. Reports indicate **30,678 page views** of which **10,270 were unique visitors** for the online article. Birmingham Now featured a paid article online. Reports indicate **144,559 page views** with **20,774 unique visitors**.

- e) The November 16th 2019, issue of Bham Now, a digital newsletter that highlights stories from local sponsors, featured the Jefferson County Volunteer Litter Cleanup Program as one of its major stories. Reports indicate that the sponsored content was **read 1,938 times** with **70,000 content headline impressions** in the first two weeks on the bhamnow.com site. For their social media, Bham Now’s Facebook had **8,164 impressions** and **308 engagements**.
- f) 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.
- g) Stormwater Program staff utilized the social media capabilities of other local organizations and agencies with which a signed ongoing MOU exists 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 were 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 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 in our environment and easy realistic solutions that can be implemented by the public to reduce stormwater runoff. Other slides inform the public on how they 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 driver's license 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, 335 local organizations, businesses, and individuals**, including **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. The Birmingham Environmental Professionals Association began posting the newsletter at its website in July of this year. Printed copies of the e-newsletters as well as a sign-up sheet to request receiving future newsletters are available at events and presentations during the year. People visiting the LitterQuitters.org website may choose to subscribe to the newsletter by entering their email address. These email addresses are added to the quarterly newsletter distribution list.

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 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 **one** 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 **one 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, Little 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 contain **two 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 **one 'call to action' poster** visualizes five positive actions people can take that will help protect water quality, and three common negative actions that harm local water quality. It reminds the 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 **two 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 **eight 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 drainpipes 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 Environmental Services Department and the Stormwater Program. Please also refer to Major Accomplishments, Illicit Discharge Detection and Elimination (II.C.3).
- g) ***It is 'Mulch' Better!*** This runoff reduction and erosion prevention program contains **eight 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 **two 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 **six 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 **one poster** was created to illustrate the parts of the storm drain system and reinforce that the system was designed to transport rainwater 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 **five 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

could pollute 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 three separate departments. During this reporting period, work began to update and merge the content from the three departments’ websites into one website which better reflects the new department (www.jccal.org/dsStormwater). Information such as the Program Plan, Annual Reports, Community Outreach Programs, and the Clean Water Awareness Survey are located under the Stormwater Management Program tab housed within the Development Services Department web page.

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 **29 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, **304 probationers** were assigned by the Court to pick up litter from along **40.50 miles** of roadways, collecting **541 45-gallon bags** of litter from **20 neighborhoods** within Jefferson County. Please see **Appendix C**.
- 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 2020 “**Don’t Drop it On Alabama**” statewide Spring Cleanup. COVID-19 impacted volunteer liter cleanups taking place as part of the spring statewide cleanup. In July 2019, staff was invited and accepted to serve a three-year term on the PALS Board of Directors from 2019 – 2021.

In Jefferson County, **29 roadside cleanups** were held resulting in **277 volunteers** spending over **1,108 hours** picking up **30.20 tons** of litter along **74.22 linear miles** of roadways and out of ditches. Of those totals, **22 cleanups** were held along roadways in unincorporated areas of Jefferson County or that the Jefferson County R&TD maintains resulting in **212 volunteers** spending **848 hours** picking up **28.42 tons** of litter along **47.22 linear miles** of roadways and out of ditches which was disposed of by the County’s R&TD. A total of 15 cleanups in the unincorporated area of Jefferson County were cancelled because of the pandemic. 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 C**.

Jefferson County was recognized at the Alabama PALS Governor's Awards Program held on November 13th 2019 for its outstanding commitment in the areas of local cleanup efforts, environmental education, and volunteerism. Jefferson County R&TD, Catherine Coleman, Home Depot (Fairfield Store), Ronnie Tew, Timothy Howle, Jeff Zissette, Bryant Keith Evans, Minor High School, Minor Middle School, Oak Grove High School, Pinson High School, Shades Valley High School, Tarrant High School, and the Mulga Loop Road Committee (First Baptist Church, Minor Heights Community, Town of Maytown, Town of Mulga, Village Creek Human and Environmental Justice Society, Inc.) all received awards in their respective categories. These achievements were featured in the Alabama PALS Winter Quarter 2020 newsletter, *The PALS Prints Volume 40*.

On February 20th 2020, the Jefferson County Commission presented **nine** Resolutions to the PALS Community Award winners from Jefferson County. After the meeting, the students being honored were given presentations by Environmental Services, Roads and Transportation, and Development Services Departments to inform them about these departments' functions as well as provide them with potential future career opportunities with Jefferson County.

The Alabama PALS Summer Quarter 2020 newsletter, *The PALS Prints Volume 41* featured the few roadside cleanups that were held prior to the pandemic throughout the state this past spring in addition to highlighting those schools in the Clean Campus Program.

- iv. Stormwater Program staff developed partnerships with various agencies specifically targeting the removal of trash and debris from waterways. In Jefferson County, **21 cleanups** were held resulting in **856 volunteers** spending over **3,424 hours** picking up **29.10 tons** of litter along **107.00 linear miles** of creek banks, bridge abutments, nearby roadways and ditches and out of the creeks themselves. Of those totals, **14 cleanups** were held in unincorporated areas of Jefferson County resulting in **474 volunteers** spending **1,896 hours** picking up **18.53 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 and C**.
 - a) A total of **two cleanups** took place along the **Cahaba River**. Reports show that **29 volunteers** removed **0.44 tons** of trash and tires. Details from each event is listed below.

Church of the Highlands, located along Grants Mill Road, spearheaded two 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 event was 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 5th 2019, **12 volunteers** picked up **0.18 tons** of litter and July 11th 2019, **17 volunteers** picked up **0.26 tons** of litter.

A Big Cahaba River Cleanup, originally scheduled for May 2nd 2020, was cancelled given the pandemic. This event was spearheaded by the Cahaba River Society and would have included seven cleanup sections stretching from the headwaters to Helena. While COVID-19 prevented this river cleanup from taking place, three 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.

- b. A total of **two creek cleanups** were held along **Shades Creek** during this reporting period resulting in a total of **27 volunteers** removing an estimated **0.71 tons** of debris and tires.

On January 17th 2020, **11 volunteers** removed **0.23 tons** of trash and debris. Jefferson County Stormwater Program provided the gloves and trash bags for this event which was spearheaded by the Freshwater Land Trust.

The 22nd annual fall Shades Creek cleanup, originally scheduled for September 26th 2020, was modified to allow for social distancing for safety, the cleanup was held over a period of three weeks starting September 15th, 2020 and ending October 5th 2020. Volunteers were asked to place their trash at their curbside for local trash pickup therefore no set tonnage was reported. While procedures included the volunteers to email photos of their volunteers and filled trash bags, not many turned these items in as asked. **16 volunteers** signed up for the cleanup receiving a backpack filled AL PALS trash bags, gloves and a 2021 stormwater calendar provided by the Jefferson County Stormwater Program. The Friends of Shades Creek provided bottled water and maps of the chosen target area to clean. Estimated tonnage based on each volunteer picking up two bags of trash is **0.48 tons**.

- c. A total of three creek cleanups were held along **Turkey Creek** during this reporting period resulting in a total of **26 volunteers** removing and estimated **0.23 tons** of debris and tires.

The Freshwater Land Trust coordinated one cleanup in the Preserve subdivision on February 1st 2020. **One volunteer** picked up **0.08 tons** of debris and tires.

The Turkey Creek Nature Preserve (TCNP) led two cleanups resulting in **25 volunteers** picking up and removing **0.15 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**.

- d. In conjunction with the Renew Our Rivers Program, a total of **nine cleanups** were held along **Valley Creek** with **501 volunteers** removing **14.42 tons** of debris and tires. The volunteer lead cleanups were held on March 14th 2020, August 15th 2020, and September 26th 2020 with two prior municipal workdays to remove the heavier items on March 11th 2020, and August 13th 2020. 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 14th 2020, there were four volunteer site registration locations for the volunteers planned but Birmingham cancelled their event given the onset of COVID-19 leaving only three cleanup events taking place. A total of **272** volunteers removed **10.39 tons** of trash and debris. A live television interview was held on March 11th 2020 on Good Day Alabama with Jeh Jeh Pruitt and a radio interview was held on March 12th 2020 on WJLD. Committee members and elected officials participated in the media segments. Alabama Power was to publish a write up about this event but given the onset of the pandemic chose not to publish the story. Community members living in Smith Camp assisted the Oak Grove cleanup by picking up litter along Camp Oliver and Smith Camp Road starting two weeks before the main event.

The Fall Biannual cleanup was held on August 15th 2020, there were five volunteer site registration locations for the volunteers, but one location pushed out their cleanup event to September 26th 2020 due to COVID-19. A total of **229** volunteers removed **4.03 tons** of debris during these five events.

- e. A total of **six cleanups** were coordinated but only **four cleanups were held** along **Village Creek** resulting in **222 volunteers** removing **7.78 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 20th 2020, as part of the United Way Hands on Birmingham Martin Luther King Jr. Day of Service Litter Cleanup Project, **222 citizens** came together and removed a total of **7.78 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, four volunteer registration locations (Minor High School, Docena, Mulga Mines and Edgewater B), four communities (Adamsville, Docena, Mulga Mines and Edgewater B), three jurisdictions (City of Adamsville, City of Birmingham, and Jefferson County Commission) and two 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 United Way 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 5th annual Mulga Loop Road Cleanup originally scheduled for March 28th, 2020 was cancelled two weeks prior to the event because of the pandemic. This 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 and Alabama Power Renew Our Rivers. It was coordinated by a working committee with representatives from the Alabama People Against a Littered State (AL PALS), Black Warrior Riverkeepers, City of Birmingham, Freshwater Land Trust, Heritage Coffee, Jefferson County Conservation District, Jefferson County Commission, Jefferson County communities of Minor Heights, Edgewater B and Mulga Mines, Jefferson County Department of Health Watershed Protection Program, Keep Birmingham Beautiful, Next Step Storm, Storm Water Management Authority, Inc., Town of Maytown, Town of Mulga, University of Alabama Birmingham, along with the faith based community organizations such as Bayview United Methodist, Edgewater United Methodist, First Baptist East Mulga, FOAM Ministries, Midway United Methodist, Open Door, Shady Grove Baptist, St. John's Baptist and Westmont Churches. A logo seal was created and approved by the working committee during this reporting period. The seal incorporates the local waterways (Village Creek and Bayview Lake) to educate the local communities about how these two waterways connect and flow. To bring about awareness of this project and to solicit additional volunteers, representatives from the Village Creek Society and Minor Heights Community did a live interview on Talk of Alabama on February 27th 2020.

As part of the *Renew Our Rivers* Program, the Village Creek Fall Cleanup which is normally held annually in September was postponed because of COVID-19.

- f. In conjunction with the *Renew Our Rivers* Program, trash and debris were removed from the **Warrior River** during the **Bankhead Lake Cleanup held on February 29th, 2020**. It was reported that **51 volunteers** removed approximately **5.53 tons** of debris.
- v. Stormwater Program Litter Quitters is an anti-litter, stormwater protection community outreach and public awareness campaign to encourage everyone, but especially high school students, to stop littering. Littering is a major problem throughout Jefferson County and local governments expend significant tax dollars cleaning up roads and other public areas. Litter degrades water quality in creeks and streams, harms humans and animals, and affects property values and quality of life. Litter Quitters was created to spread the word that littering is costly, dangerous, and . . . stupid. Age and maturity are major factors in the profile of a litterer. The most frequent culprits are teenagers and young adults. This age group is more than three times more likely to litter than older adults and that is why this campaign focuses on this demographic. Litter Quitters launched in 2018 as a pilot project for high schools within the Valley Creek Watershed. The project was so well received that it was expanded to include all 30 public high schools located in Jefferson County, Alabama.

This project 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 60 second video to the committee which reviews and approves the video. Videos are then loaded to the Litter Quitters web site where the students hold a massive social media campaign to encourage the public to watch their video 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 2020 Litter Quitters competition was originally planned to be open for 12 days starting April 10th, 2020 and ending on Earth Day, April 22nd, 2020 at 11:59 p.m. Videos were due Friday, April 3rd 2020, a week after spring break. To keep the schools engaged and focused on their local watersheds, the schools were divided into our three major watershed basins: North- Locust Fork; West – Valley Creek; and East – Cahaba. Each school was to compete for cash prizes against only the other schools in their watershed basin, thereby keeping the competition on a local level.

Representatives from the Litter Quitters committee scheduled presentations with each participating school. The presentations include information about Jefferson County’s local waterways and watersheds, litter and its negative impacts on the environment, competition details and how their school can participate. Each participating school was to submit one 60-second video into their watershed’s competition. After content review, the videos are uploaded to the Litter Quitters website for 12 days of voting. Students promote their videos, and the videos with the most ‘likes’ in each major watershed basin at the end of the competition win cash prizes. A Best Overall Cash Prize was to be awarded to the video that had the best environmental message and the best technical video.

As part of the 2020 project, participating schools were invited to send one student representative to take part in a professionally produced message/public service announcement (PSA) that would air on local television. This paid message would allow the Litter Quitters Committee to market the anti-litter message to a broader audience –the public, using the voices of Jefferson County high school students to tell the message. In addition to the aired message, a billboard campaign was launched as a cost-effective way to reinforce the negative impacts of littering by displaying the message to people who were in their vehicles.

This year, due to the COVID-19 pandemic, Litter Quitters had to adapt to school closures and reduced funding. When schools moved to online classes, many students were unable to complete their videos even with pushing back the deadline and shortening the competition timeframe. Sponsor funding was also reduced because of the financial crises. To reward the schools that were able to complete their videos, a smaller mini competition was held with a winner take all \$1,000 cash prize. This reduction in prize money helped offset the reduced funding. A shining

moment amid the pandemic came when some of the students updated their anti-littering video to include current issues such as the PPE (personal protection equipment such as masks and gloves) being littered in parking lots and other places. The students understood how harmful it was for people to leave their used gloves and masks on the ground and the negative impacts this was causing.

- ❖ A PowerPoint presentation which included information about Jefferson County's local waterways, litter, and its negative impact on the environment along with competition details, was scheduled for **25 schools**, but because of COVID, it was given to a total of **512 students in 29 classes from 24 schools**.
- ❖ **25 schools** were invited to participate in the mini competition and **three** schools submitted videos. **8,984 'likes'** were received during the **seven-day competition**.
- ❖ **Nine students submitted self-recorded videos** for use in the public service message, but because of poor quality recordings, only **eight students** appeared in the paid message.
- ❖ **Three digital billboards** ran Litter Quitters messages from April 22nd 2020 through May 27th, 2020 with a total of **96,790 ads** which delivered a total of **2,128,012 impressions**
- ❖ **195 Public Service Announcements** aired on WBRC-TV and delivered **4,917,800 adult 18+ impressions** with a **93.9 reach and a 4.1% frequency** (source: Nielsen, May 2020). In addition, a streaming campaign aired across other digital platforms that delivered **30,796 impressions**. WBRC-TV featured a Litter Quitters takeover ad on wbr.com during the voting period. A link to the Litter Quitters website was embedded in the ad to allow easy access to viewing the videos and voting. A total of **58,461 impressions were delivered in the takeover ad**.
- ❖ **The financial value of the project was \$37,691.00**. Of that total amount, **\$17,500** was received through sponsorships and local programs; **\$20,191.00** was received through in-kind donations. Media expenses totaled **\$16,300**; competition expenses totaled **\$1,200**.

The goal of this project is to have 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 litter. By providing them with information about the harmful negative impacts of litter to our waterways and environment and offering them the opportunity to participate in a media campaign to reduce litter, it is hoped that they will exert influence on their peers, family and friends to properly dispose of their trash.

A web site <https://www.litterquitters.org/> was created that housed educational material on the Litter Quitters project, watersheds and drainage basins, litter, and its impacts on the environment. This website also housed the videos that were entered into the competition.

Students have reported back to the Committee that they have been noticed at their place of employment by the public saying to them, "Littering IS Stupid!" This is a

testament that small conversations are taking place about the senseless acts of putting trash where it does not belong.

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 to provide residents, private landowners, 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 C, 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 "Bee Advisory Box" located on pesticide labels 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.

ACES hosted various free webinars starting at the onset of the Stay-at-Home Order issued by the Governor. As part of the Horticulture and Home Grounds 2020 team's *Get Outside with Alabama Smart Yards!* daily webinars were held through May where they moved to a weekly format. As part of the Urban Green team, a *Back 2 Basics Wednesdays Webinar Series* was initiated on April 1st 2020. These seminars were viewed on average by **145 people per day** and were promoted on social media and through their email listserv. The presentations were presented live through Zoom, an online video presentation format and through Facebook Live. The webinars were recorded and have been archived for people to watch at any time <https://www.aces.edu/blog/topics/landscaping/smart-yard-landscapes/> and www.aces.edu/go/B@Bvideos

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 total of **seven** events were scheduled but **four** annual events were cancelled as a direct result of the COVID-19 pandemic and the Stay at Home and Safer at Home orders. For the **three events that were held, 1,800 people participated.**

- a) **Birmingham Zoo Annual Teacher Night Out.** This annual event, normally held in September, was cancelled due to COVID-19.
- b) **Do Dah Day.** In response to the shelter in place directives issued by the City of Birmingham to control the spread of the COVID-19 virus, the Do Dah Day Board of Directors met on April 1st 2020 and voted to cancel the event scheduled for Saturday, May 16th 2020. The Board informed Stormwater Program staff that it plans to resume the annual event in May 2021.

- c) **Earth Day at the Gardens.** This event was planned for April 25th 2020 to celebrate the 50th Anniversary of the first Earth Day event but was cancelled due to the COVID-19 pandemic. Please see **Appendix C and N**.
- d) **Fishing Rodeo.** In response to the shelter in place directives issued by the City of Birmingham to control the spread of the COVID-19 pandemic, the Park and Recreation Board cancelled the event scheduled for Saturday, June 6th 2020.
- e) **Jefferson County Water Festival.** Stormwater Program staff serve on the festival committee that held the 16th Annual Jefferson County Water Festival on October 15th 2019, at Samford University. 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 which 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. It was reported that **770 4th grade students, teachers, and parents from nine local schools** attended the event. Jefferson County Stormwater Program donated materials that were distributed to each teacher attending and gave presentations for **four** of the 18 concurrent activities.
- f) **National Neighborhood Night Out.** On October 2nd 2019, the Clean Water Awareness Posters were on display. Various materials were distributed at a booth setting located at the Jefferson County Center Point Satellite Courthouse. The Stormwater Hotline backpacks were distributed along with information on the Jefferson County Oil and Grease Program, brochures on compliant reporting, dog waste, vehicle fluids and yard chemicals. An estimated **150 people** attended this free event in Center Point.
- g) **Salamander Festival.** On January 25th 2020, Stormwater Program staff displayed Clean Water Awareness Campaign posters at a booth during the event. The “It is Your “Doody” flyer, household oil and grease containers, stormwater calendars, backpacks, brochures on vehicle maintenance, yard products and illicit discharge brochures along with the electronic take back day event and upcoming household hazardous waste day event flyer were distributed to attendees. A fun and interactive poo toss game was offered to teach people the proper behavior for pet waste disposal. It was reported that **880 people** passed through the Festival.

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, they 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. There were **five** presentations scheduled but had to be cancelled because of the COVID-19 pandemic. **Two** were to civic clubs and **three** were a part of the UAB Center for Community Outreach Development (CORD) Summer Science Program held annually in the summer. Reports indicate that a total **1,746 people attended 80 presentations**.

- a) **Birmingham Botanical Gardens Brown Bag Lunch and Learn Seminars.** On July 15th 2020, Stormwater program staff, in partnership with the Friends of the Birmingham Botanical Gardens, ACES, Green Industry Training Center, City of Birmingham, City of Leeds, Jefferson County Department of Health, Stormwater Management Authority, Inc. made **one presentation** on Managing Stormwater, and the benefits of Low Impact Development and Green Infrastructure (LID/GI). Various techniques were shown and their direct correlation to improved water quality was emphasized. A total of **104 people** viewed the presentation. It was reported that **34 people** attended the live presentation which was recorded and placed on YouTube. As of September 30th 2020, an additional **70 people** viewed the recording. Please refer to Brown Bag Lunch and Learns.
- b) **Birmingham Zoo GEMS Expo.** On March 13th, 2020, Stormwater program staff, in partnership with the Jefferson County Department of Health Watershed Protection Program, held **four field science water testing training classes** to the participants of the GEMS (Girls, Engineering, Mathematics and Science) Expo. Using the Alabama Water Watch Basic Water Chemistry Test kit, students participated in fun hands-on water quality tests that monitors use monthly. Polluted runoff and prevention were discussed as well as how diverse our state is with respect to water resources and wildlife. It was reported that **40 students** from various schools attended the event.
- c) **Edgewood Garden Club.** Stormwater program staff made **1 presentation** at a monthly meeting on February 19th 2020 to **40 members**. A PowerPoint 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.
- d) **Erosion and Sedimentation Control (ESC) Workshops.** Stormwater Program staff made **one presentation** at the ESC workshop held on September 23rd 2020 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. Reports indicate **28 people** were in attendance.
- e) **Friends of Shades Creek Meeting.** Stormwater Program staff made **one presentation** on September 10th 2020 via the zoom platform to **40 participants** in a team effort with Jefferson County Department of Health (JCDH) to discuss

the agencies that administer stormwater programs within the Shades Creek Watershed. Information on the Jefferson County Stormwater Program, community awareness and involvement programs, local partnerships and resources for volunteer litter programs were discussed. The Jefferson County Department of Health's Watershed Protection Program discussed the program aspects that they administer on behalf of the cities of Mountain Brook, Irondale, and Homewood. 2021 Stormwater calendars, gloves, trash bags, and backpacks were left for volunteers participating in the socially distant volunteer annual creek cleanup.

- f) **Good Housekeeping/Pollution Prevention.** To educate the Business Community, Stormwater Program staff are available to speak to employees of various businesses. PowerPoint presentations are given which include information on the stormwater program, how the storm drainage system works, common pollutants found in waterways, actions that cause pollution and actions that staff can do at work and home that cause polluted runoff as well as actions and tasks they can do to prevent stormwater runoff both at home and work. Education materials are distributed to the employees. These materials include flyers on upcoming events and brochures on pet waste, vehicle maintenance, illicit discharges and lawn and garden care. A total of **two presentations** were made to **101 employees** during this reporting period to a salon product distribution company with a location in the McCalla area. On November 14th 2019, a presentation was given to the **61 employees** (1st shift), and on December 13th, 2019 a presentation was given to **40 employees** (2nd shift). 2020 Stormwater calendars were distributed and various education materials including brochures on vehicle maintenance, litter and illegal dumping, pet waste and reporting stormwater pollution. Please refer to Major Accomplishments, Pollution Prevention and Good Housekeeping for County Operations, Illicit Discharge Detection and Elimination (II.C.3) see **Appendix C and H**.
- g) **Litter Quitters High School Video Competition.** A PowerPoint 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 **512 students from 24 schools**. Of that total, **nine presentations** were given to **181 students** by Jefferson County Stormwater staff. The schools included Clay-Chalkville (**27**), Minor (**0**—was cancelled because of COVID-19), McAdory (**30**), Leeds (**57**) and Oak Grove (**67**).
- h) **Minor High School.** Stormwater Program staff made **one presentation** on January 20th, 2020 as part of the Minor High School Volunteer Cleanup assembly to **126 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.
- i) Stormwater program staff gave **seven presentations** to approximately **200 people** in various Jefferson County communities, local organizations, schools,

and neighborhood associations 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. 2020 Stormwater calendars were distributed, and the pollution reporting number and the sanitary sewer overflow hotline numbers were emphasized. The meetings were held on October 8th 2019 (Concord Community Meeting); October 21st 2019, January 20th 2020, and September 21st, 2020 (Minor Heights Neighborhood Association); October 10th 2019, January 9th 2020, and February 13th 2020 (Village Creek Society). Several community meetings that the Stormwater program staff were scheduled to attend were cancelled because of the COVID-19 pandemic.

- j) **The Lovelady Center.** Stormwater Program staff made **one presentation to 16 people** on March 9th, 2020 which was a part of a pilot program spearheaded by the ACES and the Jefferson County Master Gardener Association. The pilot program was created to expose interested ladies that were involved with the Lovelady Center to potential careers in horticulture by teaching the techniques of growing ornamentals and edibles. Each session has an in-class portion where a formal PowerPoint Presentation is shown on a specific topic and a hands-on portion where demonstrations are shown for proper gardening techniques at the raised bed gardens located on-site and on the roof of The Lovelady Center's parking deck. Presentation topics for this pilot program included Plant Botany, Soil and Yard Chemicals, Vegetable Gardens, Backyard Fruit, Disease and Insect Control, Herbs and Annuals and Perennials. Plans are being made to have two class levels (Gardening Basics and Level 2.0) which will be taught subsequently, each level running 5 to 6 weeks.
- k) **Oliver Elementary STEAM Day.** Stormwater Program staff provided **42 education presentations** to approximately **400 students** Grades K-5 as part of a school wide STEAM Day (Science and Technology interpreted though Engineering and Arts based in Math). 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. The City of Birmingham's Stormwater Staff utilized the Clean Water Awareness Posters to discuss the many problems with used cooking oil and grease washed into household plumbing. Information about the Jefferson County Used Household Oil and Grease Recycling Program were discussed, and materials distributed. Additionally, about **20 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. They also learned other items that pertain to STEAM.
- l) **Southeast Stormwater Association (SESWA).** The Litter Quitter Committee gave **two presentations** on the Litter Quitters Program and its outreach

opportunities during this Permit Year. On October 10th 2020, a PowerPoint presentation titled Litter Quitters: Anti-Litter/Stormwater Protection Video Competition was given at the 14th Annual SESWA Conference which was attended by approximately **400 people**. Post Conference evaluations showed that this presentation was one of the highest ranked by the attendees. As a direct result of the overwhelming positive response, SESWA invited the Litter Quitters Committee to give another presentation on this same topic in a webinar format. On January 16th 2020, a presentation titled *Litter Quitters: A Stormwater Public Education Campaign* was presented. and attended by over **100 people** according to post event reports. The webinar was attended by **100 people** who gave it a **4.2** ranking with five being excellent.

- m) **Urban Forestry Fair.** On February 26th 2020, Stormwater program staff provided **seven educational presentations** for **450 fourth and fifth grade students**, teachers, and chaperones from various schools within Jefferson County at the annual Urban Forestry Fair. 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. Other activities that were presented include Tree Cookies, Skins and Skulls, Urban Skins and Skulls, Creeping Critters of the Forest, Exploring Food Webs, Leaf and Seed ID, Fish ID Trunk, Rethink Recycling, Water Jeopardy, Goods from the Woods, Forestry Jeopardy, Everyone Lives in a Watershed, Build-A-Tree, Every Tree for Itself, Deadly Links, Know Where it Goes, and Oh Deer! Additionally, **63 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. In conjunction with the Fair and to celebrate Alabama Arbor Week, White Oak and Cherry bark Oak tree seedlings were provided by Alabama Forestry Commission and were available to all the students and teachers who attended the fair.
- n) **Valley Creek Cleanup Interview.** A total of **two interviews** was given to local media about the Valley Creek Cleanup. On March 11th 2020, a live television interview was held with WBRC Good Day Alabama's Jeh Jeh Pruitt and a radio interview was held on March 12th 2020 on WJLD morning talk radio. Both interviews were to promote participation in the Valley Creek Cleanup held on March 14th 2020.
- o) **Water Festival Workshop.** Stormwater Program staff made **one presentation** on July 22nd 2020 to **20 participants** of a Water Festival Workshop spearheaded by the Jefferson County Soil and Water Conservation District. This workshop was to inform teachers, local and state agencies throughout the State of Alabama the tasks and costs associated with hosting a water festival in their community. Presenters demonstrated the three hands activities that students participate in during these events to overcome the concerns of new volunteers and school administrators.

iv. Workshops and Seminars

A total of **14 presentations** directly related to the Stormwater Program NPDES requirements were made to **1,482 people** in 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. Planning had begun on a Low Impact Development/ Green Infrastructure workshop and a backyard stream stabilization workshop in partnership with the Water Resources Center, Alabama Cooperative Extension System, and local stormwater agencies. Planning was put on hold given the statewide Stay at Home order issued by the Governor in response to the COVID-19 pandemic.

- a) **Alabama Water Watch Chemical Workshops.** Stormwater program staff coordinated and conducted **two Alabama Water Trainings on November 12th 2019** (Basic Water Chemistry; Chemistry Recertification) to **certify nine and recertify three 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 steps to resolve water quality problems.
- b) **Brown Bag Lunch and Learn Seminars.** Stormwater program staff, in partnership with the FBBG, ACES, AGITC, City of Birmingham, City of Leeds, Jefferson County Department of Health Watershed Protection Program and the Stormwater Management Authority, Inc., created a series of free informational seminars called The Brown Bag Series. **14 seminars** were scheduled but because of the COVID-19 pandemic and the Governor of Alabama's Stay at Home and then Safer at Home orders were put in place, only **10 seminars were held** during this reporting period. The seminars, normally held at the Birmingham Botanical Gardens, were updated to a digital zoom platform and were open to all residents of Jefferson County. Topics were rearranged to accommodate the speakers and the digital platform. A benefit to using Zoom was the ability to record the presentations for people to watch later YouTube. The seminars were promoted in the JeffCo H2O Newsletters, blogs, 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. Reports indicate **1,402 participants** viewed the seminars of which **563 participants attended the live Zoom presentations** and **839 participants viewed** the recordings on YouTube as of September 30th 2020. A link for participants to fill out surveys was sent out to class participants along with a copy of the presentation and a link to view the presentation again. For those that signed up for the seminar but did not log

on to watch during the set time, a follow up email was sent with a link to watch the recording. The topics were: “Garden Trends”, May 20th; “Garden Design”, June 8th; “Medicinal Plants”, June 17th; “Freshwater Land Trust”, July 1st; “Managing Stormwater”, July 15th; “Shade Gardening”, July 29th; “Houseplants 101”, August 8th; “Growing Fruits Made Easy”, August 26th; “Native Perennials”, September 2nd; and “Ask the Experts”, September 16th 2020.

- 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 a partnership with the Homebuilders Association of Alabama (HBAA) to provide its ESC workshops and maintain a database of attendees. A total of **28 people attended** the HBAA ESC Workshop on September 23rd 2020 which was originally schedule for April 9th 2020 but had to be postponed because of COVID-19. 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 20th 2020, **42 people participated** in a Virtual Rain Barrel Workshop that was held through a Zoom digital platform given that the City of Birmingham’s Safer at Home order was still in place. Participants were able to pick up their barrels at scheduled times after the event. Through a working Rain Barrel Workshop Committee, the ACES, FBBG, City of Birmingham, City of Bessemer, City of Leeds, 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 rainwater from their roof and how best to reapply the water in their yard. Jefferson County Household Oil and Grease Recycling Program flyers and other items were distributed to all class participants that purchased a barrel. 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 2021 at various venues.

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.** County staff attended preliminary meetings for the Shades Creek Watershed 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 four reporting years was run by faculty from the Department of Communications Studies, at UAB. The analysis was 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 were created and launched on February 14th 2020. The surveys were promoted to County residents on Jefferson County’s social media platforms, and by the City of Birmingham, City of Bessemer, and the Jefferson County Department of Health Watershed Protection Division. The surveys also are available to the public at the DDS page of Jefferson County’s website and via the JeffCo H2O newsletter. During the current reporting period, **170 residents responded to the General Behavior Survey** and **131 residents responded to the Littering Behavior Survey**. Plans are underway to continue promoting the surveys through Jefferson County’s 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 for them to acquire new knowledge, advance job skills, and meet Permit requirements.

- i. Stormwater program staff participated in **27** various training, staff development, and networking opportunities. These events are in addition to the other events that have already been reported in other sections. See **Appendix C**.
- 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. 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. The COVID-19 pandemic prevented Jefferson County personnel from performing the planned outfall inspections anticipated in the previous Annual Report. Jefferson County plans to inspect **10 outfalls** during the next permit year.
- 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 for non-stormwater discharges.
- 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 28 calls** during this reporting period. A total of **eight potential illicit discharges were investigated** because of calls to the Stormwater hotline. Of the calls received, **two lead to corrective actions** being taken while **21 calls** were transferred to other appropriate agencies or departments. 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 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 and routine patrols of known dumping locations, initiate investigations into the source and subsequent removal of the dumped materials. During this Permit Year, **101 site investigations took place. These investigations resulted in 65 criminal littering cases** being opened. Of those opened cases, **42 cases resulted in citations**. 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, **28 zoning violations, 212 weed and litter violations, and zero 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 CenterPoint, Gardendale, and Hoover satellites. The information, in the form of a brochure, informs businesses of their responsibility to implement good housekeeping practices to prevent pollutants from entering the storm drainage system. Due to the COVID-19 pandemic, public access to the Courthouse and its satellites was suspended from March 17th 2020 through May 1st 2020. A supply of **175 Good Housekeeping brochures** per month were provided to the Revenue Department from October 2019 through February 2020 and June 2020 through September 2020, resulting in a total of **1,575 brochures** for distribution at Revenue’s four locations during this reporting period. Please refer to Major Accomplishments, Public Education and Public Involvement (II.C.2)
- 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 **23 drop-off points** that

accept filled containers for recycling, which reflects the addition of one new site since last year. A total of **4,036.00 gallons** was collected between October 1st 2019 and September 30th 2020.

The County's ESD distributed over **5,000 flyers** within apartment complexes, made **seven 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 refer to Major Accomplishments, Pollution Prevention Good Housekeeping for County Operations (II.C.7) and Oils, Toxics and Household Hazardous Waste Control (II.C.9) and see **Appendix D**.

- k. The Stormwater Program staff continued using the created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, 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 Department of Development Services 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. Please see **Appendix E**.
- b. During the Permit Year 2019-2020, the County's DDS staff issued Land Disturbance Activity Permits for **265 residential single-family homes** as part of its zoning approval process. A total of **71 exclusions for single-family homes**, which were exempt from Land Disturbance Permit requirements, were issued. In addition, a total of **26 commercial** Land Disturbance Activity Permits and **three commercial exclusions** were issued. Land Disturbance Activity Permits were issued to **one government** construction project. A total of **1,915 construction site inspections** were made of which **322 failed inspections**. The sites that failed an inspection were sent a notice to correct the problem and re-inspected for compliance. Of the sites that failed inspection **23 were escalated and issued a Stop Work Order**. 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 **seven 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 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 **six staff** with QCI certifications for linear road improvements, roadway construction, and bridge replacements. DDS also has **two staff** with current Certified Stormwater Inspector certifications through the NPDES National Stormwater Center. 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 **four NPDES Construction permits** 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. On September 10th 2020, the Jefferson County Commission approved the addition of Article 14 to the Jefferson County Subdivision and Construction Regulations which addresses stormwater post construction. Article 14 became effective on October 1st 2020. DDS and R&TD staff are currently in the process of creating a regulatory program for qualifying new development and redevelopment projects. Please see **Appendix F**.
- 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 19th 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 2019-2020, **82 subdivision cases, 36 rezoning cases, and 38 variances** were approved. Please see **Appendix D**.
 - e. Jefferson County is in a region that experiences the impacts of severe weather conditions including tornados, hurricanes, and both drought and heavy rainfall. 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.
 - ii. During this Permit Year, work began on a pilot project called **Mid-HOLT**. The project location is along the High Ore Trail (HOLT) next to the Midfield Fire Station (704 Doctor M.L.K. Jr. Drive, Midfield, AL 35228). This project goal was to turn a currently unattractive, weedy chert filled eroding area into an 800 square foot pollinator garden which would stabilize the soil, allow for more infiltration of runoff, increase the aesthetics of the natural area. provide habitat for pollinators and can be used as an outdoor classroom for the neighboring schools and colleges.

The project was spearheaded by the Jefferson County Master Gardener Interns (Interns) in partnership with the Freshwater Land Trust, City of Midfield, Midfield Fire and Rescue, Jefferson County Stormwater, Jefferson County Soil and Water Conservation District and the Jefferson County Department of Health Watershed Protection Division.

The **Mid-HOLT** interns would be responsible for planting design and installation of items in the designated area. Aside from a significant private donation, funding and in-kind donations have been provided by the City of Midfield, Freshwater Land Trust, Jefferson County Commission, Jefferson County Master Gardener Association, Jefferson County Soil and Water Conservation District, and Petals from the Past.

The **Mid-HOLT** project was well on its way when the COVID-19 pandemic struck. The interns that chose this project have had to make changes to the plant choices in the original plan because of a significant loss in funding and a loss in plant

donations, yet the interns persevered by updating their project scope and learned how to prorogate from stem cuttings, collecting seed and by root divisions from plants growing in their gardens. The interns managed to obtain additional funding to purchase the 300 plants for the 800 square feet. To ensure the maximum survivability of the plants, the planting date was pushed back into the fall when perennials go dormant and rain is most plentiful. The planting date has been set for Saturday, November 7th 2020. Please see **Appendix F**.

- f. During Permit Year 2019-2020, **zero public hearing**/open houses were held pertaining to amendments to the Land Use Plan that would allow development in environmentally sensitive areas of Jefferson County.
- g. County staff participated in planning sessions for an open house on a development of the Shades Creek Watershed Management Plan that took place on February 25th 2020 at Tannehill Historic Park. Please see **Appendix F**.
- 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).

6. Spill Prevention and Response

- a. For Permit Year 2019-2020, Jefferson County Emergency Management Agency (EMA) had the responsibility for spill prevention and response and responded to **46 events**. There are **six** 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. 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 to familiarize themselves with the location of the material in the event of a spill or fire. The Departments will instruct the host facility if the material is not stored correctly and will continue with periodic site visits. Hazardous materials courses are required for staff that will handle hazardous materials. For example, Hazardous Materials Awareness and Operations instructs first responders in the basics of hazardous materials including recognition, protection, safety, and contact information in the case of exposure to 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 12th 2020, **28 Jefferson County employees** from various departments attended the **Chemical Spill Response Training**. Those in attendance include staff from General Services (GSD), Environmental Services (ESD), Development Services DDS, Roads and Transportation (R&TD), and Fleet Management (FM) Division. The eight-hour 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 monthly 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. No exact tonnage is available to report. However, it is estimated that an average of **two 50-gallon bags** is collected per day by the street sweeper with an estimated total of **500 - 50-gallon bags** collected. Please see **Appendix H**.
- c. Jefferson County R&TD 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 **two inspections** were performed during the 2019-2020 Permit Year: one at Camp Ketona and one at Camp Bessemer. 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*. On November 6th 2019, the training videos *Introduction-What We Can Do, Fleet Maintenance and Material Handling, Streets and Drainage Maintenance, and Solid Waste Management* were shown to **53 Environmental Services staff** and the associated quizzes were completed by the attendees. Initial planning began in March 2020 to provide this training series for appropriate staff in DDS. However, due to the COVID-19 pandemic, these plans were suspended. The **six training videos** remain available on a CD for staff to view. Work has been done in conjunction with the Jefferson County Human Resources Department (HRD) to make these trainings available online to County staff in a PowerPoint format utilizing HRD’s 360 Articulate training tool. This ability will allow staff who perform duties which can affect stormwater quality to be emailed training assignments applicable to their job duties, and then view and complete the assigned trainings on their computer or handheld device during an allotted period. In addition, a Preventing Stormwater Pollution

PowerPoint presentation was developed by Stormwater program staff that briefly summarizes Jefferson County's permit requirements and actions staff can take at work and at home to reduce stormwater runoff. Stormwater program staff has requested that HRD upload the new Preventing Stormwater Pollution PowerPoint into its 360 Articulate training tool and include it as part of the onboarding requirements for all new county hires. Both new aspects of this project are expected to be in place by early 2021. 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. Fats, Oils and Grease (FOG) Inspector Training Workshops are held throughout the year and while ESD staff typically attend a training at a conference, this year it was not held due to COVID-19.
- g. During the 2019-2020 Permit Year, **two Stormwater program staff** completed the *Certified Stormwater Inspector* training course. This certification is good for five years. 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 to produce 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 **29 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 **63 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**.

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 a 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**.

- c. 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**.
- d. 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 **14 staff** members who are certified PHF Applicators and hold a Certified PHF License. Please see **Appendix B and H**.
- e. Camp Ketona of the County's R&TD applied herbicides on **4,544 acres** of land by using **710.00 gallons of Hard Ball, 36.00 gallons of Inlet, 1,136.00 gallons of Target, 17.00 gallons of RoundUp PRO, 5.00 gallons of Trycera, 11.00 gallons of Rodeo Aquatic, 3.00 gallons of Milestone, and 36.00 gallons of Ground Zero**. Please see **Appendix B**.
- f. Camp Bessemer of the County's R&TD applied herbicides on **1,832 acres** of land by using **5.30 gallons of Hard Ball, 79.20 gallons of Round Up, 10.10 gallons of Milestone, 528.30 gallons of MSMA, and 641.40 gallons of 2-4-D**. Please see **Appendix B**.

- g. The County's General Services Department (GSD) maintains County owned properties such as the satellite courthouses. To prevent weeds in walkways and parking lots, GSD applied **219.00 gallons of RoundUp** and **419.00 gallons of Hard Ball** during the 2019–2020 Reporting Period. Please see **Appendix I**.
- h. Camp Ketona of the County's R&TD has **two 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 always locked 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. Please see **Appendix E**.
- i. 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**.
- j. 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**.
- 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).

9. Oils, Toxics, and Household Hazardous Waste Control

- a. The FM Division of the County's R&TD implements a recycling program. For the Permit Year 2019-2020, the FMD properly disposed of **639 batteries**, **22.40 tons of scrap metal**, **19.68 tons of tires**, and recycled **4,212.00 gallons of oil**. Please see **Appendix J**.
- b. Jefferson County's ESD continued implementing a Grease Control Program 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.

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, **2,400 food service facilities** were permitted, and **1,832 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 **18 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 **11 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, Illicit Discharge Detection Elimination (II.C.3), Pollution Prevention and Good Housekeeping (II.C.7) and see **Appendix D**.

- c. A total of **three** Household Hazardous Waste Collection Days were held in various locations throughout Jefferson County. Reports show that **1,359 vehicles were serviced** in these events which collected **more than 59.25 tons of paint and paint related items, 1.35 tons of aerosols, 5.70 tons of pesticides**. Coordinated through the Jefferson County's Public Information Office, a press release was sent to the County Commissioners and to the local news media. CBS and 42 News ran advertising for this event. Reports indicated it had a **Nielsen Audience of 9,988**. Jefferson County had a paid sponsor advertisement in Bham Now which featured a video and an article that promoted the event and the reasons to want to dispose of your household hazardous waste properly. This video and article were posted on the Birmingham Now website which had **123,799 page views with 25,295 unique visitors, a rank of 408,046 and 4,551 full story reads**. Bham Now's Facebook page had **15,477 impressions and 2,539 engagements**. Bham Now's Instagram page had **3,316 impressions**, and their Twitter page had **950 impressions**. The Bham newsletter feature has **13,818 subscribers with 2,715 newsletter opens**. Their Facebook page was at **930 video views and 2.9k impressions with 32 engagements**. Jefferson County also posted the HHW event video on County's Facebook page and listed it as an event. On July 25th 2020, the post had a **2.1k reach** and the event had a **1.5k reach**. Please see **Appendix J** for summaries of each event listed below along with totals of items collected and the number of households from the varying jurisdictions.

The Jefferson County Commission, in partnership with the Jefferson County Soil and Water Conservation Foundation, Jefferson County Department of Health and Storm Water Management Authority, Inc, held a Household Hazardous Waste Collection Event on July 25th 2020. There were three site locations around Jefferson County that

participants could attend: City of Bessemer, City of Gardendale, and the City of Irondale. Each participating jurisdiction assisted with managing their sites logistics including coordinating the vendors and obtaining volunteers. This event was postponed from its original date, April 25th 2020 due to the COVID-19 pandemic but was able to be held once state and local health and safety guidelines allowed. Because of the COVID-19 pandemic, educational brochures on illicit discharges and proper vehicle maintenance along with other stormwater information was not distributed to the vehicles that participated in these events. An intake survey was administered but it was condensed to avoid prolonged contact with participants.

The first site was located at the City of Bessemer at the Public Works Laydown Yard on 15th Avenue North, Bessemer, AL. A total of **19 volunteers**, city staff from Bessemer and Birmingham, and county staff as well as **four vendor staff** registered and participated in the event at this location. Intake forms were collected from **205 vehicles**.

A second site was located at the Gardendale Frist Baptist Church South Campus at 940 Main Street, Gardendale, AL. A total of **32 volunteers**, city staff, Jefferson County Department of Health Staff, county staff as well as **eight vendor staff** registered and participated in the event at this location. Intake forms were collected from **447 vehicles**.

A third site was located at the Habitat for Humanity ReStore, 7952 Crestwood Boulevard, Irondale. A total of **39 volunteers**, city staff from Birmingham and Irondale, Jefferson County Department of Health, and County staff as well as **32 vendor staff** registered and participated in the event at this location. Intake forms were collected from **707 vehicles**.

- d. A combined total of **16.88 tons of electronics** were collected from **three Electronic and Rechargeable Battery Take-back Day events** held for residents of Jefferson County. Reports show that **582 households** participated in these events which were sponsored by the Jefferson County Commission in partnership with City of Bessemer, City of Birmingham, City of Leeds, Jefferson County Conservation District, Jefferson County Department of Health, Keep Birmingham Beautiful, Protec, and Storm Water Management Authority, Inc. An intake survey was administered, and all participants received a reusable car trash bag filled with educational materials from all the partners except for the June 13th event. Because of COVID-19, no materials were distributed to patrons to reduce the contact between volunteers and participants. Materials that were distributed at the March 7th and August 8th events included flyers on upcoming events and workshops, brochures on proper disposal of pet waste and household used cooking oil and grease, vehicle maintenance, illegal dumping and how to report pollution, and copies of the Clean Water Awareness posters that explain how the storm drain system works and the common pollutants that enter this system from people's daily actions. 2021 Stormwater calendars were also given out along with Jefferson County Household oil and grease containers during the August 8th event. These events were held in areas prone to illegal dumping to proactively circumvent the improper disposal of electronics and batteries. Details from each event are listed below. Please see **Appendix J**.

On March 7th 2020, an event was held at The Birmingham Zoo parking lot. Intake forms were collected from **127 vehicles** representing **233 households** located within **18 local jurisdictions** from **34 unique zip codes**. A total of **18 volunteers** from

partnering agencies along with Ramsay High School Students and the Village Creek Society assisted with unloading vehicles. A total of **6.50 tons** of electronics were collected. The local news media (WBRC) attended the event and interviewed staff from Jefferson County. This interview was aired during local news segments on the evening news and Sunday broadcasts. Reports from the Jefferson County's Public Information Office, which initiated a social media campaign to get the public informed, show that the Facebook video promotion reached **8,313** and had **4,514 views**. The Facebook event that was created and housed on the Jefferson County's Facebook page had a reach of **7,200** with **152 responses**.

On June 13th 2020, an event was held at the Jefferson County CenterPoint satellite courthouse parking lot. Given the COVID-19 pandemic, safety precautions were put in place and a shorter intake form was created and used. There was also a decision not to give out any promotional items or reusable car trash bags to reduce the contact between the participants and the volunteers. Intake form information was collected from **96 vehicles** representing **103 households** located within **23 jurisdictions** in **35 unique zip codes**. A total of **16 volunteers** from partnering agencies along with the City of CenterPoint and the Village Creek Society assisted with the unloading of vehicles. A total of **4.35 tons** of electronics were collected. This event was promoted by the Jefferson County Public Information Officer on the County's Facebook and Twitter accounts, but no viewing information was able to be collected.

On August 8th 2020, an event was held at Birmingham City Hall/Linn Henley Park on 20th Street North. Intake forms were collected from **220 vehicles** representing **246 households** located within **21 jurisdictions** in **49 unique zip codes**. A total of **14 volunteers** from partnering agencies along with Birmingham Park and Recreation Board assisted with the unloading of vehicles. A total of **6.03 tons** of electronics were collected. Reusable car trash bags were given out to the first **150 vehicles** that participated. Items in the bags included the 2021 Stormwater Calendar, information on Illicit Discharges and Improper Disposal, Jefferson County Household Oil and Grease Recycling Program and location of sites, Vehicle Maintenance and Good Housekeeping practices to keep items out of our storm drain system and waterways, Litter Quitters and how to report illegal dumping, and items from our partnering agencies. Bham Now did a feature article on the Household Hazardous Waste Day which included the August 8th recycling event. This article which posted on August 5 had **4,551 views** on the Bhamnow.com site. Bham Now's social media summaries include **15,477 impressions** and **2,539 engagements** on Bham Now Facebook page; **3,316 impressions** on Bham Now Instagram page; **950 impressions** on Bham Now Twitter page. Bham Now's Newsletter which featured the article was sent to **13,818 subscribers** and reports indicate **2,715 newsletter opens**. Through the Bham Now's Facebook page, the video had **930 views**, **2.9k impressions** and **32 engagements**. Jefferson County's Public Information Officer posted the video on Jefferson County's Facebook page having a **401 person reach** and on Jefferson County's Twitter page having a **400 person reach**.

- e. To promote proper disposal of various household items, the Jefferson County Commission partnered with AEC on its recycling program, **Recycle Alabama**. The AEC is a statewide nonprofit which promotes the proper disposal and recycling of various items. Although AEC closed its Recycling Center in 2019, it still maintains a

digital presence and partnered with Jefferson County Department of Health, the University of Alabama at Birmingham, Jefferson County Commission, and several municipalities to organize 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 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 N**.

- f. Stormwater Program staff promoted **one National Prescription Drug Take-Back Event** held in the Jefferson County area on October 26th 2019 and the event scheduled for April 25th 2020 was postponed because of COVID-19. Prescription drugs were accepted at the Household Hazardous Waste Day event on July 25th 2020 at all three sites. These events are designed to promote safe and proper disposal of unwanted or expired medications and to prevent drugs from being flushed down toilets and ending up in waterways. Over **2.50 tons** of medication was collected statewide during the October 2019 event according to the Drug Enforcement Administration. Materials to promote this program were available in both English and Spanish and in various formats (posters, handouts, etc.). The Drug Enforcement Administration (DEA) published its Notice of Proposed Rulemaking for the Disposal of Controlled Substances in the Federal Register Dec 21st 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 the 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 Stormwater Runoff

- a. Jefferson County owns **three landfills** that are operated by Santek Waste Services. During the 2012-2013 Permit Year, the Turkey Creek Landfill (ALG160139) closed the active cell and the facility currently operates as a drop-off location, like the Johns Transfer Station. To date, there is only **one 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 three facilities to identify and control pollutants from industrial and high-risk runoff sites. The sites complied 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, 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 Program staff worked with the Emergency Management Agency and fire stations within Jefferson County to modify the pre-fire plan checklist to include an acknowledgement of conveying information regarding potential sources of stormwater pollution. EMA's E-Plan service was utilized to create a database of all **31 Fire Departments** in unincorporated Jefferson County. These departments were contacted, and a database of contact information was compiled along with a database of Tier II facilities. There are **439 Tier II facilities** within Jefferson County proper. Most of the Fire Departments either inspect Tier II facilities or do not have Tier II facilities within the fire district. Of the **54 Tier II facilities** in unincorporated Jefferson County, **12 facilities** were determined to not have NPDES permits issued by ADEM as required by the Industrial Stormwater Runoff requirement. An informational guide to potential stormwater pollutants was created and sent to fire districts upon request. Please see **Appendix K** for a listing of facilities.
- c. The County's R&TD implemented **three NPDES Industrial Permits** issued by ADEM to the County. Please see **Appendix E**.
- d. 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

- A strength of Jefferson County’s Stormwater Program is 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 to expand its educational reach throughout Jefferson County. The Stormwater Program 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 deliver public education more efficiently and effectively. Please refer to Major Findings (II.B.4) and Future Direction (II.E.5).
- A particular strength of Jefferson 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 of Chapter 9 bankruptcy. One consequence of these reductions was the inability for the County to remove litter and trash from along roadways. In 2012, Jefferson 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 Jefferson County’s 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 held on November 13th 2019 for its outstanding commitment in the areas of local cleanup efforts, environmental education, and volunteerism. Jefferson County R&TD, Catherine Coleman, Home Depot (Fairfield Store), Ronnie Tew, Timothy Howle, Jeff Zissette, Bryant Keith Evans, Minor High School, Minor Middle School, Oak Grove High School, Pinson High School, Shades Valley High School, Tarrant High School, and the Mulga Loop Road Committee (First Baptist Church, Minor Heights Community, Town of Maytown, Town of Mulga, Village Creek Human and Environmental Justice Society, Inc.) all received awards in their respective categories. Please see **Appendix C**.
- A strength of Jefferson 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. Accela is transitioning the County Departments away from paper-based processes and siloed software systems toward an integrated platform. The implementation of this software delivers enhanced efficiencies and capabilities to the services and functions that the County offers to the public.

- A limitation of Jefferson County’s 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. According to The Drought Monitor, Jefferson County and much of Alabama experienced drought conditions for much of the Permit period. Then Jefferson County experienced severe weather, tornados, and flooding for days on end; all adverse events that created dangerous conditions for personnel. One after another, meteorologists, statistics, and news reports documented weather extremes statewide, often setting records. **Appendix L** includes supporting documentation of the adverse climatic conditions which prohibited the collection of all samples.
- A second limitation of Jefferson County’s Stormwater Program is the way in which the County is geographically situated and politically structured. Although 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.

E. FUTURE DIRECTION

- Jefferson County will continue its work towards implementing the new MS4 NPDES Phase I Permit requirements that was issued September 27th 2018.
- With the constraints, postponements, and limitations that the COVID-19 pandemic has placed on Jefferson County and the services it provides to its residents; alternative means are being considered and the use of technology has become much more important to the Stormwater Program. The launching of the Accela Civic Platform Project and the implementation of Phase III of this application will enable more aspects of the permitting, review, and inspection processes to be accomplished online. The Stormwater program education staff will continue discussing with its partners the feasibility of providing webinars, workshops, and meetings for the public via video communications programs such as Zoom.
- 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 2022 Stormwater Calendar which will be printed and distributed during the 2020-2021 Permit Year. The calendar features six significant creeks/rivers in Jefferson County along with six Stormwater Program elements that assist us in improving local water quality in Jefferson County's rivers, lakes, creeks, and streams. Each month includes hotline numbers to call to report illegal dumping and sanitary sewer overflows and helpful tips to prevent stormwater runoff. The intent of this Stormwater calendar is to educate and inform people of the impacts their daily lives have on our local streams, lakes and rivers and give them alternatives that will help reduce the volume and velocity of stormwater runoff as well as protect our local waterbodies 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 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.
- The County's DDS continues updating and improving its webpages, located within the Jefferson County website (www.jccal.org/ds) to better provide the public with information and resources regarding the services delivered.

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	9,280.13 cubic yards removed from ditches; 2,288.74 tons and 3,406.00 cubic yards of storm debris removed	Appendix B
	Operate and maintain to minimize MS4 to remove pollutants	Refuse, litter, and debris removal	Implemented	Roads and Transportation Department removed 105 bags and 267.41 tons of trash from roadside	Appendix B
	Operate and maintain to minimize pollutants	De-icing activities	Implemented	Jefferson County applied 20.00 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 15 partnering organizations with 4 formalized Agreements in form of Memorandum of Understandings	Appendix C and N
	Communication mechanisms and advertisements	Printed and electronic materials	Implemented	153 brochures and flyers downloaded; 2,550 brochures distributed; 5,000 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	29 stormwater inlet covers stamped	See Appendix B
	Individual participation in litter removal activities	Litter, floatable and debris removal	Implemented	46.95 tons of litter was removed from Unincorporated Jefferson County roadways and waterways in 41 Cleanups by 686 volunteers	See Appendix B and 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	512 students from 24 schools attended Litter Quitters PowerPoint Presentation, Litter Quitters videos received 8,984 likes during 7-day competition, 2 Good Day Alabama segments; 3 paid digital billboards; 195 television messages and 4,917,800 adult (18+) television impressions; takeover advertisement delivered 58,461 impressions	See Appendix C
	Inform and involve the public on stormwater pollution prevention	Complaint reporting, community events, presentations, workshops and seminars	Implemented	3 events with approximately 1800 people; 80 presentations were given to 1,746 people; 14 workshops and seminars were held with 1,482 participants	See Appendix C
	Public input and evaluation	Evaluations, community forums, and surveys	Implemented	0 public hearing /open house held	N/A

<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 27 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	28 hotline calls and email notifications were received; 8 potential illicit discharges investigated, 2 led to corrective actions	See Appendix D
	Detect and eliminate illicit discharges	Investigations and enforcement proceedings for illegal dumping, zoning and weed and litter violations	Implemented	101 site investigations; 65 criminal littering cases, 42 cases resulted in citations; 28 zoning violations, 212 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 1,575 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	23 drop-off points with a 4,036.00 gallons of used cooking oil and grease were collected; distributed 5,000 flyers within apartment complexes and made 7 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	292 Land Disturbing Permits were issued: 26 Commercial Permits, 265 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	74 Exclusions were issued: 3 Commercial exclusions and 71 Residential exclusions	See Appendix E
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	Implemented	1,915 construction inspections were performed; 322 failed inspections of which 23 were escalated to Stop Work Order	See Appendix E
	Reduce pollutant discharge from construction sites	Staff training as Qualified Credentialed Inspector (QCI)	Implemented	7 DDS staff certified; 6 R&TD staff certified	Appendix E
	Reduce pollutant discharge from construction sites	Inspection of Jefferson County NPDES construction sites	Implemented	4 NPDES Permitted sites	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	82 subdivision cases, 36 rezoning cases, and 38 variances were approved	Appendix D
	Assess impacts on water quality	Land use plan	Implemented	0 public hearing / open house held	N/A
Spill Prevention and Response	Prevent, contain, and respond to spills	Conduct spill response	Implemented	EMA responded to 46 events	Appendix G
	Spill and response training	Conduct spill response	Implemented	28 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, approximately 500 50-gallon bags collected	Appendix H
	Prevent and reduce discharges from Country operations	Implement inspections at fueling facilities	Implemented	60 inspections were performed (5 facilities once a month)	Appendix H
	Prevent and reduce discharges from Country operations	BMP pollution prevention training	Implemented	53 staff attended BMP video trainings; FOG training throughout permit year; 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	29 events promoted by AGITC; 63 events promoted by GIW; 14 staff hold a Certified PHF License	Appendix B, H 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 E and I
	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	Implemented	3,218.30 gallons of herbicides were applied along 6,376 acres (Camp Ketona applied 1,954.00 gallons; Camp Bessemer applied 1,264.30 gallons); General Services applied 638.00 gallons of herbicides	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	Appendix H
Oils, Toxics, and Household Hazardous Waste Control	Identify and control pollutants in stormwater discharges	Jefferson County FM in-house recycling program	Implemented	639 batteries were recycled; 4,212.00 gallons of motor oil were recycled; 22.40 tons of scrap metal were recycled; 19.68 tons of tires	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	2,400 food service facilities were permitted, 1,832 annual site inspections, and 18 sites were non-compliant	Appendix D
	Detect and eliminate discharges to the MS4	Household Hazardous Waste collection event for public	Implemented	3 locations held; 1,359 vehicles. See Appendix for quantities of items collected.	Appendix J
	Detect and eliminate discharges to the MS4	Electronic and reusable battery take-back collection event for public	Implemented	3 events held; 582 households participated; 16.88 tons of electronics were collected	Appendix J
	Detect and eliminate discharges to the MS4	National prescription drug take-back event	Implemented	1 national event held; over 2.50 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; 3 NPDES Industrial Permitted sites; 12 SARA Title III, Tier II facilities	Appendix E and K
Monitoring Program	Detect illicit connections and improper discharges to the MS4	Dry weather screening	Implemented	17 Instream sites sampled	Appendix L
	Detect illicit connections and improper discharges to the MS4	Wet weather screening	Implemented	5 Instream sites sampled	Appendix L
	Detect and eliminate discharges to the MS4	Wet weather investigative monitoring	Implemented	4 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	101 site investigations; 65 criminal littering cases, 42 cases resulted in citations; 849 zoning approvals issued, and 230 violations issued for zoning, weed and litter, floodplain	Appendix D
	Land Disturbance Activity Permits	Erosion and sediment control permits / exclusions issued	Implemented	292 Land Disturbing Permits; 74 Exclusions	Appendix E
	Land disturbance activity inspections	Erosion and sediment control inspection activities	Implemented	1,915 construction inspections were performed; 322 failed inspections reported of which 23 escalated to Stop Work Order	Appendix E
	Subdivision and Construction	Subdivision and Construction Regulation	Implemented	82 subdivision cases, 36 rezoning cases, and 38 variances were approved	Appendix D

		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 to set up the monitoring plan. The staff established **six 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 Road (33.59806, -86.86801) and the land use 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 Road (33.32568, - 86.94914) with land use characterized predominantly as undeveloped, agricultural, with a few light industrial areas. The Hydrologic Unit Code (HUC)12 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 Road (33.70938, -86.69634) and the land use 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 Road (33.75665, -86.8254) having similar land use 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 Road bridge (33.44738, -87.12154) and the land use 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 Parkway (33.5479, -86.92603) with the most diverse land use 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 2019-2020, 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 that 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 or limited data collected (i.e., E. coli). The analytical results were graphed for each monitoring location and a trendline was formulated to interpret the results. The previous reporting year found Five Mile Creek the only major receiving water that did not sustain a decrease in total suspended solids for wet weather samples; However, the creek did have a decrease in total suspended solids in this reporting period that indicated water quality improvement over time. The most downstream sampling point on Turkey Creek had a slight increase in total suspended solids during the wet weather sampling collection period. 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. 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. Except for 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 for the Post Construction program given the passing of Article 14 in the Subdivision and Construction Regulations.
- 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 Checklist to include an acknowledgement of conveying information regarding potential sources of stormwater pollution.
- The Village Creek instream location (VIC3ISD) will be relocated as site conditions have deteriorated over time posing threats to human safety.
- During the reporting process, Stormwater Program staff discovered the FM Division had transitioned as the responsible party for the monthly fuel facility inspections. Work will begin to educate FM staff on stormwater responsibilities and inspections. SOPs will be updated accordingly. Please see **Appendix H**.

VI. Inspection and Enforcement

- a. Jefferson County’s Development Services Department (DDS) issued **849 zoning approvals** and received complaints relating to weed and litter, criminal littering, and zoning violations. During this reporting period, **230 notices of violation** (28 zoning, 212 weed and litter) were investigated. Please see **Appendix D**.
- b. During the Permit Year 2019-2020, the County’s DDS staff issued Land Disturbance Activity Permits for **265 residential single-family homes** as part of its zoning approval process. A total of **71 exclusions for single family homes** which were exempt from Land Disturbance Permit requirements were issued. In addition, a total of **26 commercial** Land Disturbance Activity Permits and **three commercial exclusions** were issued. Land Disturbance Activity Permits were issued to **one government** construction project. Please see **Appendix E**.
- c. A total of **1,915 Erosion and Sediment Control Inspection activities** were performed for the Land Disturbance Activity permitted sites with **322 failed inspections** during the Permit Year 2019-2020. This number includes the **23 escalated written notice corrective measures** (Stop Work Orders, etc.) during this reporting period. Complaints associated with permitted sites are handled through site inspections. Please see **Appendix E**.
- d. A total of **65 criminal littering site investigations** took place. These investigations resulted in **101 criminal littering cases being opened**. Of those opened cases, **42 cases resulted in citations**. 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**.