

JEFFERSON COUNTY COMMISSION

MUNICIPAL SEPARATE STORM SEWER SYSTEM

PERMIT NUMBER: ALS000001

ANNUAL REPORT FOR REPORTING PERIOD

OCTOBER 1, 2020 TO SEPTEMBER 30, 2021

Jefferson County Commission

Commissioner Jimmie Stephens -President

Commissioner Lashunda Scales-President Pro Tempore

Commissioner Steve Ammons

Commissioner T. Joe Knight

Commissioner Shelia Tyson

Cal Markert, Chief Executive Officer

Dayla Baugh P.E., Deputy Director
Department of Development Services





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).

Cal Markert

1-19-22

Cal Markert, Chief Executive Officer

Date

Dayla Baugh

1-19-22

Dayla Baugh P.E, Deputy Director

Date

ANNUAL REPORT - Year Three of Five
October 1, 2020 to September 30, 2021

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I. General Information

A. CONTACTS

The Stormwater Program staff of the Jefferson County Commission, under the supervision of Cal Markert, Chief Executive Officer, responsible for all the County Department functions and responsibilities, and Dayla Baugh, the Deputy Director of the Department of Development Services collected, coordinated information from the various Jefferson County Departments for inclusion, and prepared this 2020-2021 Annual Report.

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

Dayla Baugh P.E.

Deputy Director

Jeff Gunter, P. E.

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CONTACTS

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JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	BAUGH, DAYLA	205-325-5321	INTERIM DIRECTOR, DEPUTY DIRECTOR
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	GUNTER, JEFF	205-325-5321	CHIEF CIVIL ENGINEER
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	LEE, TAMEKIA	205-325-5321	STORMWATER PROGRAM MANAGER
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	ELLEDGE, MANDY	205-325-5321	ENVIRONMENTAL BIOLOGIST
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	DICLEMENTE, LYN	205-325-5321	EDUCATION TRAINING MANAGER
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	BERRES, HANA	205-325-5321	EDUCATION TRAINING COORDINATOR
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	TRAMMELL, WAYNE	205-325-5321	WATER POLLUTION TECHNICIAN
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	MORRISON, MICHAEL	205-325-5321	ZONING ADMINISTRATOR
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	COLLINS, SHEILA	205-325-5321	ZONING SUPERVISOR
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	DIPIAZZA, JOHN	205-325-5321	SR. SANITATION INSPECTOR
JEFFERSON COUNTY DEPARTMENT OF DEVELOPMENT SERVICES	MOVAHED, MONDONNA	205-325-5321	SYSTEMS ANALYST
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	BURLESON, KATHY	205-503-2192	GIS DATABASE SUPERVISOR
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	KORNEGAY, BETH	205-325-5189	CHIEF CIVIL ENGINEER
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	TYLER, CHARLES	205-325-5100	DIRECTOR OF FLEET MANAGEMENT

AGENCY	NAME	TELEPHONE NO	TITLE
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	BRANTLEY, ALAN	205-481-4228	PUBLIC WORKS COORDINATOR
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	POSTELL, WILLIAM	205-849-2321	ASSISTANT SUPERINTENDENT
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	BOWMAN, BILLY	205-849-2321	PUBLIC WORKS SUPERVISOR
JEFFERSON COUNTY DEPARTMENT OF ROADS AND TRANSPORTATION	CAMPBELL, WAYNE	205-481-4228	HIGHWAY DISTRICT SUPERINTENDENT
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JEFFERSON COUNTY DEPARTMENT OF BUDGET MANAGEMENT	WHITE, GAY NELL	205-254-2039	ADMINISTRATIVE SUPERVISOR
JEFFERSON COUNTY DEPARTMENT OF BUDGET MANAGEMENT	SHEPARD, MARILYN	205-325-5765	SENIOR BUDGET ANALYST
JEFFERSON COUNTY DEPARTMENT OF BUDGET MANAGEMENT	WORMLEY, LENE	205-325-5765	SENIOR BUDGET ANALYST
JEFFERSON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES	ROHLING, BRIAN	205-281-1003	CHIEF CIVIL ENGINEER
JEFFERSON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES	GRAY, DANA	205-238-3877	ADMINISTRATIVE ASSISTANT
JEFFERSON COUNTY DEPARTMENT OF GENERAL SERVICES	HOLT, TARI	205-238-3877	ENVIRONMENTAL COORDINATOR
JEFFERSON COUNTY DEPARTMENT OF GENERAL SERVICES	COCKRELL, STEVE	205-325-8755	ELECTRONIC TECHNICIAN
JEFFERSON COUNTY DEPARTMENT OF GENERAL SERVICES	WALTERS, LOUIS	205-325-1441	BUILDING MAINTENANCE SUPERVISOR
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II. Program Evaluation

A. PROGRAM OBJECTIVES

The requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit ALS000001 (Permit), issued by the Alabama Department of Environmental Management (ADEM), list specific responsibilities for the Permittee/Co-Permittees. The Stormwater Management Program (SWMP) is responsible for implementing the Stormwater Management Program Plan (SWMPP) within unincorporated Jefferson County, Alabama. The SWMP stipulates certain obligations that must be met 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 2020-2021 Permit Year. Work implemented by other County Departments which fulfills parts of the MS4 NPDES Permit requirements also is reported by the SWMP in its Annual Report. Please refer to **Appendix A** for the latest version of the SWMPP.

B. MAJOR FINDINGS

During the Permit Year October 1, 2020, through September 30, 2021, the following information was collected and evaluated as major findings that have impacted water quality:

- According to the final 2020 water quality 303(d) list of ADEM and the EPA, 8 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 waterways' ability to support its designated usage classification.

The six 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, and pathogens (E. coli). Sources of this pollution range from urban runoff, municipal, and pasture grazing.

The two segments 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 industrial and atmospheric deposition.

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

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

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

*Due to the complexity of the documented impairments for the above-mentioned stream segments, *many have more than a single TMDL for that stretch*. In addition, at this time there is no implementation legislation in place for the designated reductions which are allocated to the MS4 in a TMDL. However, the *intent* of the EPA is to have the MS4 jurisdiction over the impaired water body to assume the responsibility for the nonpoint source allocations of the

TMDLs in the re-issued Phase I NPDES Permits to be completed by ADEM. That intent has not been finalized by EPA through ADEM at this time.

- Structural control devices used to collect litter floatables were installed as a three-year project in various creeks around Jefferson County. Funds for some of the Litter Gitters were obtained by an EPA grant that was spearheaded by the Freshwater Land Trust in partnership with many other organizations including the Jefferson County Stormwater Program. Several local municipalities have opted to install these devices in their jurisdictions with their municipal funds. Please see **Appendix B**.
- The ongoing 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 see **Appendix C and N**.

C. MAJOR ACCOMPLISHMENTS

The following list outlines major accomplishments during the Permit Year October 1, 2020, through September 30, 2021 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 (RT&D) maintains and inspects existing and newly constructed structural controls on an annual basis. It was reported that **three inspections** were performed by DDS staff on structural controls with a follow up inspection required on one. As a result of these inspections, routine maintenance activities were performed during this Permit Year. Please see **Appendix B**.
- b. The County's RT&D maintains the storm sewer system within the unincorporated Jefferson County rights-of-way. During the reporting period, **9,939.13 cubic yards** of material were removed from the storm sewer system and another **7, 863.84 tons** of storm debris was removed. Please see **Appendix B**.
- c. The County's RT&D maintains the County's roadways. During this reporting period, **460 bags** and **857.51 tons** of trash was collected from along Jefferson County roadways. **Please see Appendix B**.
- d. During this reporting period, **1 fulltime employee** were assigned in the County's RT&D to pick up litter from along roadways in unincorporated areas of Jefferson County.
- e. The County's RT&D de-icing program was implemented by Camp Bessemer and Camp Ketona. A total of **27 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 see **Appendix D**.
- g. Freshwater Land Trust and partners were awarded a \$500,000 EPA Trash Free Waters Program Grant (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, rivers, and major tributaries in the greater Birmingham. This EPA grant will also supplement the existing Litter Quitters Anti-Litter Video Competition education program. The Valley Creek Pilot Litter Gitter, established in FY 2020, along with five other sites, had the Litter Gitter device installed. Some site locations were changed during the fiscal year because of tree limb issues, ability to obtain access the device, and underperformance.
- h. Reports indicate that a total of **2.73 tons** was collected from the EPA funded devices (Little Shades Creek McCallum Park **0.83 ton**, Shades Creek Brookwood **0.31 ton**, Village Creek Airport **0.58 ton**; Village Creek Roebuck **0.08 ton**; Valley Creek 1-20 **0.58 ton**, Valley Creek 7th Street **0.89 ton** and the two that were changed were Village Creek Vulcan Materials **0.01 ton**, Village Creek Red Lane **0.71 ton**, Jefferson County

is one of the 17 project partners and a member of the project Committee called Lit Git. Please see **Appendix B** for a summary of items collected by quarter for each site.

An additional five Litter Gitters, paid for by agencies outside of the Grant, were installed during this reporting period. These devices will assist in reducing the amount of litter in various creeks, four of which flow through the unincorporated areas of Jefferson County.

As part of the Grant, a total of four educational videos would be created and promoted to the public to bring about awareness of the project and how litter on the ground ends up in our waterways. During this reporting period, two videos were produced and promoted through various outlets and taping for the third video began. The first video can be viewed at <https://vimeo.com/405205447> and the second <https://vimeo.com/594688131>. Please see **Appendix B**.

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 2020-2021: 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 United States Army Corp of Engineers Valley Creek Flood Feasibility Study 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 **12,000 children and adults** benefited from the FBBG education offerings which would not have been possible without the support of the **1,350 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 **330,000 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. 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. During this reporting year, **12 brochures and seven flyers** were displayed at the County's DDS front counters in brochure holders. The ability to track the number of views each item receives and when those views occurred was created and implemented by IT staff during the prior reporting year. A total of **207 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.

- a) **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. The brochure also encourages residents to properly dispose or recycle these materials.
- b) **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 Good Housekeeping brochures** per month were provided to the Revenue Department from October, 2020 through September, 2021, resulting in a total of **2,100 brochures** for distribution at Revenue's four locations during this reporting period.
- c) **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.

- d) **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.
- e) **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.
- f) **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.
- g) **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.
- 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) **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.
- j) **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.
- k) **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.
- l) **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.

The flyers are: **It's Your "Doody"** (dog waste), **Jefferson County Cooking Oil and Grease Recycling Locations** Please see **Appendix C**.

- ii. **Calendar.** A 12-month printed 2021 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. 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. 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, media alerts with stormwater pollution prevent events, initiatives, accomplishments, promotion of workshops/events and community activities in which the public can participate. These items are written and distributed to local media and posted on social media and the County website through the County Manager's Office.

Reports indicate that the Jefferson County social media platforms received the following traffic:

- The electronics drop off day held on March 12, 2021, had 66 shares, 12 reactions, 11,000 people reached.
- LinkedIn had 196 impressions with an engagement of 6.12%.
- An Earth Day post on April 22, 2021, which promoted the upcoming Household Hazardous Waste Day event reached 485 people.
- The electronics drop off day held on June 9, 2021, reached 2,500 people.

A Podcast series was started during the 2020 fiscal year. They contain information on various Jefferson County initiatives. On July 12, 2021, the Stormwater Program participated in a volunteer litter cleanup podcast that also featured a representative from our communities. The podcasts are downloadable from the main page of the jccal.org web site. Reports indicate that the Jefferson County Alabama: Podcast for the People, episode 16: Is Your Neighborhood Trash? How Jeffco Supports Community Clean-ups was downloaded 33 times during this reporting period.

<https://jeffcoalpodcastforthepeople.buzzsprout.com/1119785/8863962-16-is-your-neighborhood-trashy-how-jeffco-supports-community-clean-ups>

- b) Through the Jefferson County Commission Public Information Office, Jefferson County contracted with Bham Now, a local digital newsletter that highlights stories from local sponsors. A total of 5 articles that pertain to the Stormwater Program Permit and programs were published. The details of each article are listed below.

A paid article was published online on November 25, 2021, which talked about what to do with the leftover oil from frying a turkey. Another article which featured a video on how to properly collect and recycle oil was featured in the December 13, 2020, article. Reports indicate 1,522 full story reads, 14 total click-throughs. Bham Now's social media campaign reports Facebook reports 8,853 impressions and 431 engagements, video stats had 2.7k views with 5.4k impressions, Instagram had 1,365 impressions, and their Newsletter feature had 2,355 opens.

On March 19, 2021, a paid article highlighted the new sewer overflow warning system, the first ever in Alabama. Reports show that there were 5,625 full story reads, 124 clicks to the site through the story which gave a 2% CTR. On Bham Now's social media there were 23,747 Facebook impressions, 1,749 engagements resulting in a 7% rate. Instagram had 2,444 impressions and Twitter had 2,158 impressions. The digital newsletter had 2,942 opens.

On March 29, 2021, a paid article highlighted the April 24, 2021, Household Hazardous Waste Collocation Day. Reports show that there were 5,628 full story reads, 89 clicks to the site through the story which gave a 1.5% CTR. On Bham Now's social media there were 28,749 Facebook impressions, 2,335 engagements resulting in an 8% rate. Instagram had 2,123 impressions and Twitter had 1,275 impressions. The digital newsletter had 2,612 opens.

On September 23, 2021, a paid article to promote the October 9, 2021, Electronic and Recycling event was published. The article also featured a video which discusses the reasons one should participate and where the items that are recycled go after the event.

- c) As part of the Litter Quitters Video Competition, six live interviews were given, two billboard designs on three boards, three digital ads, six print articles, one paid print advertisement, three radio adds, and one television public service message were created. The first four segments which aired on WBRC-TV's Good Day Alabama on April 9, 2021, 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. Also featured during the four live segments was the Litter Gitter, a structural control device that traps litter in the creeks. Various Agencies emphasized the importance of properly disposing of trash to avoid having it end up in our creeks. On April 29, 2021, a radio interview was held on Birmingham Mountain Radio 107.3-FM. The Litter Quitter Project was highlighted, and the video winners were announced. On April 30, 2021, ABC 33/40's Talk of Alabama aired a television interview highlighting the project in addition to announcing the winning schools. Discussions on how people can get involved with their local communities to host volunteer litter cleanups occurred including showing the various resources.

Participating schools were invited to be in a paid commercial that would air on local television stations. Financing for this commercial was provided by Freshwater Land Trust, Drummond Company, Inc, Keep Alabama Beautiful, American Cast Iron Pipe Company, City of Bessemer, City of Birmingham, City of Hoover, City of Leeds, and the Jefferson County Department of Health Watershed Protection Program. The anti-litter commercial, featuring students from 11 participating schools, was professionally produced as an in-kind donation from WBRC and aired on FOX6, ABC33/40, MY68 and CW21 between May 3, 2021, and June 27, 2021. This same paid commercial was aired as a no charge commercial on each of these broadcast television stations. The air schedules included highly viewed programs including morning and evening news. It was reported that WBRC-TV FOX 6 delivered 3,894,500 impressions, WBMA-TV ABC 33/40 delivered 1,069,400 impressions, and while the PSA commercial aired on WABM-TV My 68 and WTTO-TV CW21 there were no impressions reported.

Since roadway litter comes from trash being intentionally tossed out of vehicles, a billboard campaign along major roadways was launched to bring about awareness that litter is, well, stupid! One image was of an in-stream litter collection device that can be found in ten various locations around Jefferson County featured the tag line: Don't feed the Litter Gitter, Be a Litter Quitter! to bring about an awareness of these collection devices which were recently installed in waterways to trap the litter that gets washed by rain from nearby roads. The other image was to promote the proper way to dispose of trash, put trash in a trash can. The goal was for people to realize that by doing this simple action a person could prevent litter and Be a Litter Quitter! The digital billboards campaign started on May 10, 2021, ending on June 27, 2021. The billboards were located along I-65 Northbound and I-65 Southbound near the Green Springs exit and northbound on Richard Arrington Boulevard at Vulcan Park. Reports show **74,454 flip** ads were shown with over **1.53 million impressions delivered**. The Committee paid for **42,000 flips** and Mashburn Outdoor sponsored the remainder.

Three 30-second radio PSAs were professionally recorded by Briana Fewell, Hoover RC3 High School student, who was also featured in the Litter Quitters television PSA. The radio PSAs were produced by Summit Media. These PSAs aired on local radio stations between May 17, 2021, and June 27, 2021. Three versions of the same message were created to feature various sponsors. The goal

of this advertising was to target drivers and emphasize the need to properly dispose of their trash and not litter. Summit Media also coordinated a social media story and post about this campaign and held an on-air interview announcing the video competition winners on Birmingham Mountain Radio. PSAs that aired were not only purchased, but also given as an in-kind donation at no charge on Birmingham Mountain Radio and JAMZ. The PSA read: “Litter is more than just ugly. It’s full of germs. It can cause car wrecks. Litter gets washed by rain into our streams and rivers. It harms fish and animals... and it can make you sick. Litter costs a lot to clean up, so, what can you do? Join (insert sponsor’s name) by becoming a Litter Quitter. Go to Litter Quitters dot org and learn how you can get involved. That’s Litter Quitters dot org. And if you do litter.... please stop! Littering is ...well, just stupid.”

Digital ads were created by our vendors as in-kind donations. WBRC.com and WBRC Apps delivered 255,050 ads and had 237 click throughs that landed on the voting page to encourage people to vote for their favorite video. On June 11, 2021, 95.7 JAMZ Summit Media promoted the winners of the competition and invited their listeners to watch the videos on Facebook and Instagram. This post had nine social interactions and reached 664 people.

A total of seven articles were published that promoted the video competition and congratulated the winners, only one was a paid advertisement.

The Jefferson County Commissioners presented the Litter Quitters winners Resolutions of Achievement on May 20, 2021, at a digital Commission meeting. The Resolutions were distributed to the winning schools after the meeting. Photos of the school officials with their Resolutions were taken for the report.

- d) As part of the volunteer roadside litter cleanups, **one live television interview** and **one radio interview** were given. On March 10, 2021, the Valley Creek Cleanup was promoted on **three segments of Good Day Alabama with Jeh Jeh Pruitt on FOX 6**. On March 11, 2021, the Valley Creek Cleanup was promoted and discussed during the morning Gary Richardson show on WJLD radio.
- e) On November 23, 2020, 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 **1,304,525 page views with 95,787 unique visitors**. WIAT-CBS reports for their 5:00pm news a **Nielson Audience of 11,310** and for their 10:06pm show **68,488 unique visitors with 513,888 page views**.
- f) On April 23, 2021, Jefferson County’s Public Information Office was interviewed during **two live segments of Talk of Alabama** to promote the upcoming Household Hazardous Waste Day event. Details such as the event time, locations, and what to bring were discussed and the flyer was displayed.

- g) On May 4, 2021, as part of the Freshwater Land Trust's Red Rock Tuesday the Mid-HOLT High Ore Garden was promoted on **three segments of Good Day Alabama with Jeh Jeh Pruitt on FOX 6**. Various agencies, including the Jefferson County Stormwater Program discussed the project and its positive impact on the local waterway.
- h) 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. These slides continued to be displayed during the current reporting year at the downtown Jefferson County Courthouse, Hoover Satellite Courthouse, and Gardendale Satellite Courthouse. Since the onset of this initiative in FY 2017, the monitor slides have been updated to meet current requirements. The most recent updates to the design and layout of the slides were made during the current reporting period. The updates enabled some slide topics to be combined, and a total of **25 slides were created**.

These slides were submitted to the Jefferson County Revenue Department (RD) and will be uploaded to the monitors located in the downtown Jefferson County Courthouse as well as the Center Point Satellite Courthouse, Hoover Satellite Courthouse, and Gardendale Satellite Courthouse once the RD secures a vendor to implement and provide maintenance for this function. The monitors are in the main public area of each Courthouse site and can be viewed by any resident of Jefferson County who comes in person to renew a vehicle tag, boat tag, driver's license, business license, or otherwise visits these sites.

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, 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, 345 local organizations, businesses, and individuals**, including **23 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 on its website in July of FY 2020. 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.

v. **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 phone number as well as Jefferson County's web site. A total of 36 posters were created since the Jefferson County Stormwater Program began in FY 2011. These posters have been modified twice since, most recently in FY 2019, when we updated the look, revised/modified the content, and created **five new posters** for a **total of 28 posters**. The most recent modification was done in response to the focus of the new Permit requirements.

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. The posters are as follows:

- a) ***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

- b) ***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.
- c) ***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.
- d) ***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.
- e) ***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).
- f) ***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.
- g) ***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.
- h) ***‘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.

- i) **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.
- j) **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.
- k) **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.

vi. **Website**

The Department of Development Services was 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 Department of Development Services web page.

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

- i. The Stormwater Program purchased several storms 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 RT&D installed **37 stamped inlet covers** during this Reporting Period. Please see **Appendix B**.
- ii. During this Reporting Period, a total of **10 signs at five locations** were installed throughout Jefferson County. The signs inform the public about creek/watershed they are crossing and lists the water pollution reporting hotline number. At each site, the signs were placed so that they could be viewed by oncoming traffic from both directions. Please see **Appendix C** for a listing of the sign locations as well as photographs of a few of them installed.

- iii. 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, **832 probationers** were assigned by the Court to pick up litter from along **98.6 miles** of roadways, collecting **1,242 45-gallon bags** of litter from **40 neighborhoods** within Jefferson County. Please see **Appendix C**.
- iv. 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 2021 “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 to 2021.

In Jefferson County, **44 roadside cleanups** were held resulting in **607 volunteers** spending over **2,428 hours** picking up **65.54 tons** of litter along **117.30 linear miles** of roadways and out of ditches. Of those totals, **34 cleanups** were held along roadways in unincorporated areas of Jefferson County or that the Jefferson County RT&D maintains, resulting in **345 volunteers** spending **1,380 hours** picking up **60.03 tons** of litter along **91.30 linear miles** of roadways and out of ditches which was disposed of by the County’s RT&D. The amount of material collected is contained in the County’s RT&D yearly tonnage report under material debris removed from ditches. Please see **Appendix B and C**.

Jefferson County was supposed to be recognized at the Alabama PALS Governor’s Awards Program scheduled for November 18, 2020, for its outstanding commitment in the areas of local cleanup efforts, environmental education, and volunteerism. Because of the uptick in COVID-19 numbers, the Awards Program was cancelled with the local jurisdictions to distribute the awards. Jefferson County RT&D, Keith Golden, Jonika Smith, Adger Community, Minor High School, Minor Middle School, Woodlawn High School, Ramsey High School, G.W. Carver High School, Oak Grove High School, Red Mountain Heights Community, Martintown Raimund Community, Ruby Thompson, and Scarlett Worley all received awards in their respective categories. These achievements were featured in the Alabama PALS Winter Quarter 2021 newsletter, *The PALS Prints Volume 42*.

On January 7, 2021, the Jefferson County Commission was to present the AL PALS Award winners Resolutions for their achievements at their in-person meeting. Because of the rise in COVID-19 cases, this was postponed until the virtual February 25, 2021, meeting where Jefferson County Commission presented **14 Resolutions** to the PALS Community Award winners from Jefferson County and one additional Resolution for the AL PALS Program Office for their continued

support of the volunteer litter cleanup programs. After the meeting, the Resolutions were given to the Award Winners.

The Alabama PALS Summer Quarter 2021 newsletter, *The PALS Prints Volume 43*, 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.

- v. Stormwater Program staff developed partnerships with various agencies specifically targeting the removal of trash and debris from waterways. In Jefferson County, **25 cleanups** were held resulting in **903 volunteers** spending over **3,612 hours** picking up **45.89 tons** of litter along **137.50 linear miles** of creek banks, bridge abutments, nearby roadways, and ditches and out of the creeks themselves. Of those totals, **15 cleanups** were held in unincorporated areas of Jefferson County resulting in **520 volunteers** spending **2,080 hours** picking up **8.63 tons** of litter which was disposed of by the County's RT&D or other partnering agencies. The amount of material collected is contained in the County's RT&D yearly tonnage report under material debris removed from ditches. Please see **Appendix B and C**.
 - a. A total of **one cleanup** took place along the **Cahaba River**. Reports show that **20 volunteers** removed **an estimated 0.9 tons** of trash and tires.

Church of the Highlands, located along Grants Mill Road, spearheaded one roadside cleanup to prevent litter and trash from entering the Cahaba River as part of their Annual *Day of Service* project held on July 10, 2021. All items collected during this cleanup was placed in the Church's dumpster, so no formal tonnage amount was given. The volunteers projected picking up 0.9 tons of trash.

- b. A total of **three scheduled creek cleanups** were held along **Shades Creek** during this reporting period resulting a total of **164 volunteers** participated in removing litter, debris, and tires from along Shades Creek and its tributaries. No tonnage was reported given the volunteers were asked to either take their filled bags to their homes for curbside pickup or to be placed in Samford University's dumpster to assist with safety protocols given COVID-19. On October 3, 2020, **23 volunteers** from Samford University removed **various amounts** of trash and debris. Jefferson County Stormwater Program provided the gloves and trash bags for this event which was spearheaded by the Friends of Shades Creek. This event was a continuation of the normally scheduled fall cleanup in late September. Volunteers were asked to place their trash at their curbside for local trash pickup. Therefore, no set tonnage was reported.

A total of 60 volunteers participated in a month-long spring cleanup held during March 20, 2021, through April 22, 2021, as part of the Friends of Shades Creek Earth Day celebrations. There was no tonnage reported given the volunteers were instructed to take the items collected and place at their curbside for pickup.

The 23rd Annual Fall Shades Creek Cleanup, scheduled for September 25, 2021, was modified to allow for social distancing for safety. The bulk of the cleanup was held on September 25, 2021, but volunteers were given the flexibility to clean-up the week before or after if needed. Depending on the

location chosen to cleanup, volunteers were asked to place their trash at their curbside for local trash pickup therefore no set tonnage was reported. A total of **91 volunteers** participated in the event during this reporting period. All volunteers received a backpack filled with AL PALS trash bags and gloves provided by the Jefferson County Stormwater Program. The Friends of Shades Creek provided bottled water and maps of the chosen target area to clean.

- c. A total of two creek cleanups were held along **Turkey Creek** during this reporting period resulting in a total of **24 volunteers** removing and estimated **0.08 tons** of debris and tires.

The Turkey Creek Nature Preserve (TCNP) led two cleanups resulting in **24 volunteers** picking up and removing **0.08 tons** of debris from their property, Turkey Creek, and surrounding roads. The service groups participating in the cleanups were Avient Corporation and the Springville Cub Scout Troop. The Jefferson County Commission and the TCNP work together under an ongoing formalized Memorandum of Understanding to reduce water quality pollution along roadways. Please see **Appendix C and N**.

- d. In conjunction with the Renew Our Rivers Program, a total of **12 cleanups** were held along **Valley Creek** with **499 volunteers** removing **45.99 tons** of debris and tires. The volunteer lead cleanups were held on March 13, 2021, March 20, 2021, and August 14, 2021, with two prior municipal workdays to remove the heavier items on March 10, 2021, and August 11, 2021. 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 13, 2021, and March 20, 2021, there were four volunteer site registration locations for the volunteers planned, but given unforeseen circumstances, we had some cancel and others added. The City of Lipscomb had to cancel their Saturday's volunteer cleanup event; however, the City of Hueytown's Beautification Board joined as did three other communities to assist the Oak Grove High School's cleanup which had to be pared down given the COVID-19 pandemic and school rules from five target roads to just one. In support of the High School, three local communities in Oak Grove planned for a cleanup along roadways that would have been cleaned by the students. These included Adger, Providence, and Smith Camp. In total, there were seven volunteer site locations with a total of **253** volunteers removed **9.39 tons** of trash and debris. A live, television interview was held on March 10, 2021, on Good Day Alabama with Jeh Jeh Pruitt, and a radio interview was held on March 11, 2021, on WJLD. Committee members and elected officials participated in the media segments.

The Fall Biannual cleanup was held on August 14, 2021. There were six volunteer site registration locations for the volunteers. One location pushed out their cleanup event to September 18, 2021, due to unforeseen circumstances. Weather prevented it from taking place, so it was rescheduled for October 9, 2021. The events were scheduled to take place in the cities of Brighton,

Fairfield, Hueytown, Lipscomb, Midfield and Pleasant Grove. The City of Brighton rescheduled their cleanup activity to launch on September 18, 2021. A total of **5 registration sites** held cleanups with **246 volunteers** removed **35.00 tons** of trash and **1.60 tons of tires** during these five events.

- e. A total of **nine cleanups** were held along **Village Creek** resulting in **286 volunteers** removing **26.08 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. The Mulga Loop Road cleanups were coordinated by a working committee to include additional partners which are listed in the details below. Items collected were removed by the City of Birmingham Public Works Department or the County's RT&D. Details from each event is listed below.

On January 18, 2021, as part of the United Way Hands on Birmingham Martin Luther King Jr. Day of Service Litter Cleanup Project, **80 people** came together and removed a total of **18.25 tons** of material. The items collected were picked up and disposed of by the County's RT&D. This project consisted of 8 hosting/supporting organizations and two volunteer registration locations (Mulga Mines and Edgewater B) 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, and Village Creek Human and Environmental Justice Society.

The 5th Annual Mulga Loop Road Cleanup was greatly impacted by the COVID-19 Pandemic. The event was originally scheduled for March 24, 2020, but had to be cancelled two weeks prior to the event because of the COVID-19 Pandemic. The spring cleanup was rescheduled and took place during three separate events to keep the volunteers safe. The first event was spearheaded by the Minor Community which was held on October 17, 2020. The second event was in partnership with University of Alabama Birmingham (UAB) *Into the Streets* service organization and held on October 23, 2020. During the last cleanup event, volunteers from a LINK Program spearheaded by a local organization in the Minor Community, Next Step Storm, joined members of the Minor Community, Town of Maytown and Town of Mulga along with staff from the City of Birmingham and the Jefferson County Commission to pick up litter from along Mulga Loop Road from Bayview Bridge back to Minor Parkway. In total, **105 people** picked up **6.33 tons** of litter and debris during these three Fall projects.

Both the Martin Luther King Jr. Day of Service and Mulga Loop Road litter cleanups were 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 used on all the materials was created in FY 2020, by the working committee. The seal incorporates the local waterways (Village Creek and Bayview Lake) to educate the local communities about how these two waterways connect and flow.

As part of the Renew Our Rivers Program, the Village Creek Fall Cleanup was held on November 7, 2020. Reports indicate that **22 volunteers** picked up **0.33 tons** of litter.

The 6th Annual Spring Mulga Loop Road Cleanup took place over two days. This project consisted of two volunteer registration locations, five communities, three faith-based organizations, and four jurisdictions coming together to pick up litter along roadways, ditches and creekbanks along Mulga Loop Road and Bayview Bridge protecting the Village Creek Watershed from pollution. On March 26, 2020, an event was held in partnership with UAB *Into the Streets* service organization whereas students from UAB cleaned up along designated sections led by the Mulga Loop Road Committee. On March 27, 2021, a community lead cleanup was held in the Minor Community and the City of Birmingham. A total of **63 people** removed **0.99 tons** of material. The County's RT&D picked up and removed the items that were collected. Please see **Appendix C**.

A two day fall Mulga Loop Road Cleanup was scheduled for September 17, 2021, and September 18, 2021, but the weeklong rains from Tropical Storm Nicholas interfered causing the events to be cancelled after three months of planning.

As part of the Renew Our Rivers Program, the Village Creek Spring Cleanup was held on June 6, 2021. A total of **16 volunteers** picked up **0.18 tons** of litter.

- f. The annual Bankhead Lake litter clean-up was cancelled given at the time of the event there was an uptick in COVID-19 infections.
- vi. 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): Alabama Cooperative Extension System, 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 2021 Litter Quitters competition was open for 12 days starting April 10, 2021, and ending on Earth Day, April 22, 2021, at 11:59 p.m. Videos were due Friday, April 5, 2021. 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 River. 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 which was judged by an independent group of people from the Committee.

As part of the 2021 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 televised 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 televised message, a digital billboard and radio 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 driving.

This year, due to the COVID-19 pandemic, Litter Quitters had to adapt to school closures and reduced funding. To meet these new guidelines and the completed scheduled of the student from in class to remote learning and /or a hybrid of both, the Committee recorded the presentations that normally take place in person in the classroom. Three versions of the same presentation were available for viewing form the www.LitterQuitters.org web site. The PowerPoint presentations included information about Jefferson County’s local waterways, litter, and its negative impact on the environment along with competition details.

- ❖ **90 students from 11 schools** watched the recorded presentations.
- ❖ **30 schools** were invited to participate in the mini competition and **seven** schools submitted videos. **5,034 ‘likes’** were received during the **12-day competition**.
- ❖ **11 students** appeared in the televised message (G.W. Carver, Clay-Chalkville, Hewitt-Trussville, Homewood, Hoover, Spain Park, Hoover RC3, Hueytown, McAdory, Mortimer Jordan, Oak Grove, and Shades Valley) which aired between May 3, 2021 and June 27, 2021.
- ❖ **One student** recorded the three 30 second radio messages (Hoover RC3) which aired on local stations between May 17, 2021 and June 27, 2021.
- ❖ **Three digital billboards** ran two Litter Quitters messages from May 10, 2021 until June 27, 2021.
- ❖ **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 wbrc.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 total media value for this project was \$83,288 of that total amount \$36,288.00 was in-kind donations and sponsorships, the remaining 41,000.00** was paid for by the 2021 Litter Quitters Sponsors.

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.

The Litter Quitters website, <https://www.litterquitters.org/>, created during FY 2019 houses educational material on the Litter Quitters project, watersheds and drainage basins, litter, and its impacts on the environment. This website also houses the videos that were entered into the competition and a listing of local volunteer litter

cleanups so that anyone interested in helping make our area cleaner has resources to do so.

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.

Please see **Appendix C** for a more comprehensive final report which includes the winning schools, media

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, 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 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. During this program year, a total of **725 mosquito dunks**, packaged into 2 dunks per pack, were distributed.

A total of **600** were provided to the Jefferson County Revenue Department (RD) located Center Point Satellite Courthouse for distribution to the public. An additional **75** were distributed to the public on Earth Day at an event at the Birmingham Botanical Gardens and another **50** were given to the participants of the annual Rain Barrel Workshop. The bags also contained information about proper use of the product as well as tips for homeowners to reduce the potential for mosquitos to breed.

- 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.
- iv. 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 2021 team’s *Get Outside with Alabama Smart Yards!* weekly webinars were held throughout the year starting in January. As part of the Urban Green team, a *Back 2 Basics Wednesdays Webinar Series* was held twice a month starting in February 2021. These seminars were viewed on average by **45 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.facebook.com/pg/AlabamaSmartYardsAlabamaExtension/videos/?ref=page_internal and <https://www.aces.edu/blog/topics/lawn-garden-urban/urban-green-back-2-basics-wednesdays-webinar-series/>. The Stormwater Program promoted these webinars, the toll-free Master Gardener Helpline and the weekly Alabama Garden Chat webinars to various groups, communities and people that called with general questions about yard and landscape issues.

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 **two** 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 **five events that were held**, more than **1547 people participated**.

- a) **Birmingham Zoo Annual Teacher Night Out.** This annual event, normally held in September, was rescheduled twice and finally cancelled due to COVID-19.
- b) **Do Dah Day.** In response to the directives issued by the City of Birmingham to control the spread of the COVID-19 virus which prohibited public gatherings in city owned parks, the Do Dah Day Board of Directors chose to relocate the Saturday May 15, 2021, event to the Cahaba Brewing Company, Birmingham, AL. Jefferson County Stormwater Program Staff did not participate in this event due to continuing COVID-19 community spread concerns. Plans already have been made in coordination with the Do Dah Day Board of Directors for Stormwater Program Staff to participate in the 2022 event.
- c) **Earth Day at the Gardens.** Given the COVID-19 pandemic, this event was canceled down to allow for social distancing. In lieu of the weekend event that brings in large crowds and lots of vendors, the Gardens staff collected items from various agencies and distributed them at various stations in the formal garden. The event took place on Earth Day proper, April 22, 2021, to celebrate the missed 50th Anniversary of the first Earth Day that was scheduled for 2020. Reports indicate that **75 of the Litter Quitters backpacks**, various literature and mosquito dunks supplied by the Jefferson County Stormwater Program were distributed. Please see **Appendix C**.
- d) **Fishing Rodeo.** On June 6, 2021, Jefferson County's Household used cooking oil and grease recycling containers along with other printed materials on Jefferson County's Household Oil and Grease Recycling Program were distributed a booth that was free and open to the public. Current listings of all the local Recycling Centers were distributed along with trash bags and information on the volunteer litter cleanup events. Stormwater Program staff and the City of Birmingham Stormwater Program staff shared this booth and assisted in talking to the participants and distributing information. It was reported that close to **1,072 anglers attended** this annual event held at the East Lake Park.
- e) **Jefferson County Water Festival.** Stormwater Program staff serve on the festival committee that hosts the annual Jefferson County Water Festival. Given the COVID-19 pandemic, the water festival was first postponed from its normal fall time until the spring where it then had to be cancelled altogether. The Committee went to so far as so discuss virtual options, a logo contest with the theme Wild About Water, but with the teachers and school schedules with hybrid learning it just didn't work out this year. 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.

- f) **National Neighborhood Night Out.** On Tuesday, August 3, 2021, various Stormwater Program educational materials were distributed by the Jefferson County Sheriff's Office at booths located at the Bessemer Recreation Center and the Sylvan Springs Community Center during the National Neighborhood Night Out event. Stormwater Hotline backpacks were distributed along with information on the Jefferson County Oil and Grease Program, brochures on complaint reporting, the helpful information brochure, a flyer with information about the October 9, 2021, electronic collection event, and a flyer listing the Brown Bag Lunch and Learn Series virtual seminars. An estimated **300 people** attended this free event at the Bessemer Recreation Center and **100 people** attended at the Sylvan Springs Community Center.
- g) **Salamander Festival.** Given the COVID-19 Pandemic, the normally scheduled Salamander Festival which takes place the last weekend in January, went to a virtual format with no outside vendors. It still featured the favorite icon, the Spotted Salamander. The virtual festival include art, activities, other critters, fun stories, information about our environment, and lots of interesting videos. Additionally, the festival featured a real (non-virtual) hike, called "The Salamander Storyboard Trail Hike" which took place at Homewood Forest Preserve. Attendees could take the hike on their own and be guided by Storyboard signs. There were QR Codes along the way for additional information. Presentations on the Shades Creek Watershed, the salamanders and their migrations and other topics were shared over a course of a month starting on January 30, 2021, ending on February 27, 2021. There were no metrics kept on how many people attended this virtual event or hike.

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, 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 by staff of which **two** were cancelled and **three** were administered by teachers because of the COVID-19 pandemic. Reports indicate that a total **472 people attended 24 presentations.**

- a) **Erosion and Sedimentation Control (ESC) Workshops.** Due to the COVID-19 pandemic, Stormwater program staff and its municipal partners postponed the Erosion and Sedimentation Control Workshop tentatively to April, 2022.
- b) **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 created in a digital format to be downloaded from the Litter Quitters website given the COVID-19 pandemic. This was in response to the school closures, remote learning, and other safety precautions. The recordings took place on January 26, 2021, and February 12, 2021. Jefferson County, City of Birmingham, Jefferson County Department of Health and Jefferson County Soil and Water Conservation Districted participated in the recordings. Three versions of the same presentation were available for viewing from the website (<https://www.litterquitters.org/classroomresources>). Reports indicate that **90 students** from **11 high schools** watched the recorded presentations (G.W. Carver, Clay-Chalkville, Hewitt-Trussville, Homewood, Hoover, Spain Park, Hoover RC3, Hueytown, McAdory, Mortimer Jordan, Oak Grove, and Shades Valley).

To promote Litter Quitters, committee members gave presentations on the program. During this fiscal year, a total of three presentations were scheduled but due to the COVID-19, only **two presentations** were held. On January 28, 2021, committee members gave a presentation at the virtual Sustainability Summit hosted by the Alabama Coastal Foundation. It was reported that **30 people** attended. On August 7, 2021, a committee member gave a presentation at the Alabama Association of Conservation Districts Annual Meeting. It was reported that **42 people** attended. Committee members were scheduled to present at the annual Keep Alabama Beautiful Conference on August 26, 2021, but a week prior to the event it was postpone until January, 2022, due to the COVID-19 pandemic.

- c) **MidHOLT High Ore Garden.** A total of **one interview** and **two presentations** were given to highlight the project and its positive impacts to the environment by providing food and habitat to pollinators and water quality by slowing the sheet flow of stormwater from the nearby imperious surfaces and allowing that water to infiltrate rather than becoming runoff all while providing natural beauty to the area. On November 10, 2021 a brief presentation was made to the Master Gardeners at their monthly virtual meeting to a total of **42 people**. On January 12, 2021, a presentation was made as the primary program for the monthly virtual meetings. Reports indicate that **53 people** attended. On May 5, 2021, as part of the Red Rock Tuesday with Jeh Jeh Pruitt Good Day Alabama, a total of four segments featured the project of which three were live and the last one was recorded. Sadly, due to time the last segment was not shown. Stormwater Program staff presented during one of the three segments discussing the stormwater benefits pollinator gardens have on the environment and waterways. Other presenters were Freshwater Land Trust, the 2020 Jefferson County Master Gardener Interns, Alabama Cooperative Extension System, and the Jefferson County Department of Health.
- d) Sierra Club – Cahaba Group. Stormwater program staff gave one virtual presentation to members of the Sierra Club – Cahaba Group on June 17, 2021, a part of their monthly meeting. A total of **13 people** attended the presentation.
- e) Stormwater program staff gave **15 presentations** to approximately **250 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. 2021 Stormwater calendars were distributed, and the pollution reporting number and the sanitary sewer overflow hotline numbers were emphasized. The meetings were held on October 8, 2020, and February 15, 2021, (Minor Heights Neighborhood Association); October 8, 2020, November 12, 2020, December 10, 2020, January 14, 2021, February 11, 2021, March 11, 2021, April 8, 2021, May 13, 2021, June 10, 2021, July 8, 2021, August 12, 2021, and September 9, 2021 (Village Creek Society); and October 15, 2021, (Rock Mountain Lakes Association). Several community meetings that the Stormwater program staff were scheduled to attend were cancelled because of the COVID-19 pandemic.

- f) **UAB Center for Community Outreach Development (CORD) Summer Science Program.** Stormwater Program staff provided materials for this annual event in lieu of attending in person given UAB safety guidelines. Materials included videos, Power Point Presentations, and the Water Jeopardy Game which were presented by the main instructor on June 9, 2021; June 23, 2021; and July 15, 2021) for the “Over the Hills and Through the Vales” Camps. The students viewed the Weather Channel’s *After the Rain* video, played the USGS *Water Jeopardy Game*, and watched a PowerPoint presentation called *Beyond the Roof*. A total of **24 students** attended the sixth Grade CORD Summer Camps.
- g) **Urban Forestry Fair.** This event, typically held in February each year, this event was postponed until April 28, 2021, but eventually was **cancelled** due to the COVID-19 pandemic. Typically, Stormwater program staff provides educational presentations for 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 are 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, other volunteers from various agencies and other organizations donated their time to this event. Students learn 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 are provided by Alabama Forestry Commission and are available to all students and teachers who attended the fair.

h) **Valley Creek Cleanup Interview.** A total of **two interviews** was given to local media about the Valley Creek Cleanup. On March 11, 2021, a live television interview was held with WBRC Good Day Alabama's Jeh Jeh Pruitt and a radio interview was held on March 10, 2021 on WJLD morning talk radio. Both interviews were to promote participation in the Valley Creek Cleanup held on March 13, 2021 and March 20, 2021.

iv. **Workshops and Seminars**

A total of **17 presentations** directly related to the Stormwater Program NPDES requirements were made to **1,394 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.

a) **Alabama Water Watch Chemical Workshops.** Stormwater program staff coordinated and conducted **two Alabama Water Trainings on June 21, 2021**, (Basic Water Chemistry; Chemistry Recertification) to **certify two and recertify two 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) **Alabama Watershed Stewards.** Planning had begun on a Low Impact Development/ Green Infrastructure workshop and a Backyard Stream Stabilization workshop in partnership with the Alabama Watershed Stewards, Water Resources Center, Alabama Cooperative Extension System, and local stormwater agencies in 2019 when COVID-19 pandemic struck. To keep in line with the safety guidelines and proper social distancing many of the in-person workshops moved to a digital format. During this permit year, Jefferson County Stormwater program staff were asked to review the weeklong Alabama Watershed Stewards Workshop and the weeklong Litter Pickup Challenge workshops submit comments and or recommendations upon completion. Additional virtual workshops were offered whereas the Jefferson County Stormwater Program promoted each one within our media outlets. The courses included Designing Bioretention Cells, How to Plan a Litter Pickup, Design a Rain Garden, Alabama Watershed Stewards online course, Permeable Pavers Training,

c) **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 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 **1,354 participants** viewed the seminars of which **687 participants attended the live** Zoom presentations and **667 participants viewed** the recordings on YouTube as of September 30, 2021. 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: “Shinrin Yoku”, March 24; “Pest Management 101”, April 7; “Aromi Azaleas”, April 21; “Backyard Birds”, May 5; “What’s Bugging You”, May 19; “Eat Your Landscape”, June 2; “Preserving the Bounty”, June 16, “Heat Hardy Perennials”, June 30; “Stormwater 101”, July 14; “Planting Fall Veggies”, July 28; “Trees and Neighbors Law”, August 11; “Indoor Gardening”, August 25; “Fall Turf Maintenance”, September 8; “and “Ask the Experts”, September 22, 2021.

- d) **Erosion and Sedimentation Control Workshops.** Due to the COVID-19 pandemic, Stormwater program staff and its municipal partners postponed the Erosion and Sedimentation Control Workshop tentatively to April, 2022.
- e) **Rain Barrel Workshop.** A total of **36 people** participated in the 2021 Rain Barrel Workshop. On June 19, 2021, **24 people** participated in the Virtual Rain Barrel Workshop that was held through a Zoom digital platform given the safety requirements of social distancing with the COVID-19 pandemic. An additional **12 people** purchased additional barrels after the workshop and were given the link to watch the recorded presentation at their leisure. Reports indicate that **11 people** viewed the recording. All 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. Given the increase in the cost of the barrels and the goal of the Committee to make these barrels affordable for the public to install, the Jefferson County Soil and Water Conservation District and the Sustainable Garden Initiative assisted with the financial sponsorships to keep the price affordable.

A rain barrel presentation which included runoff calculations and the basic ways to install rain collection systems including cisterns was provided. The participants learned the benefits of capturing and storing rainwater from their roof and how best to reapply the water in their yard.

Backpacks featuring the Litter Quitters logo and website containing information on watersheds, runoff and how to report stormwater pollution, 2021 Stormwater Calendars along with information on the Jefferson County Household Oil and Grease Recycling Program, the Jefferson County Soil and Water Conservation District, the Birmingham Botanical Gardens Library, and packets of *Asclepios tuberosa* (milkweed seeds) were distributed to all class participants that purchased rain barrels.

A post event email which included a link to an evaluation and a recording of the presentation was sent to all workshop's participants. Various digital presentations from the Alabama Cooperative Extension System (Get Outside the Alabama Smart Yards, Rain Barrels, Rain Gardens, and Home Grounds Irrigation) were used to reinforce the information provided during the workshop and information requested from the participants including drip irrigation. Because the surveys were not done in person, there was a lower response rate than in years past. A total of one survey was returned.

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 2022 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. **SWMPP.** The SWMPP was made available for public comment on Jefferson County's website
- iii. **Surveys.** Two surveys were launched on June 7, 2021 and remained open through September 30, 2021. The purpose of the ten question General Behavioral Survey was to assess the public's knowledge of and behavior regarding stormwater impacts. The purpose of the ten question Littering Behavior Survey was to assess the public's knowledge of the impacts of littering on stormwater quality and their behavior regarding littering. The surveys were promoted to County residents on Jefferson County's social media platforms, and by AL Extension, Jefferson County Conservation District, Jefferson County 4-H, and Birmingham Botanical Gardens. 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, **101**

residents responded to the General Behavior Survey and 63 residents responded to the Littering Behavior Survey. The information collected from these surveys continue to be used to evaluate the Stormwater Program’s education efforts as required by the Permit. Plans are in place to reopen the surveys during the next reporting year and continue promoting them through Jefferson County’s social media platforms and other venues to make them available to the public and solicit their participation.

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.

- ii. Stormwater program staff participated in several various trainings, staff development, and networking opportunities. These events are in addition to the other events that have already been reported in other sections. Please see **Appendix C**.
- iii. 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. At current, a total of **39 outfalls** have been identified with preliminary work done for the feasibility of accessing these structures safely. Due to the record-setting rainfall during the permit year, no outfalls were screened. It is the intent to inspect **20 outfalls** during the next permit year. Please refer to **Appendix D** for a complete list of outfalls and **Appendix L** for the exhaustive inclement weather references.
- 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/SubdivisionRegs-100111.pdf.
- d. During this Permit Year, there were no enforcements.
- e. 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 36 calls** during this reporting period. A total of **six potential illicit**

discharges were investigated because of calls to the Stormwater hotline. Of the calls received, **three led to corrective actions** being taken while **26 calls** were transferred to other appropriate agencies or departments. Please see **Appendix D** for a complete list of calls.

- f. The Jefferson County Commission continued using a 24-hour hotline for the public to call and report illegal dumping and trash issues (205-582-6555) which was promoted 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, initiated investigations into the source and subsequent removal of the dumped materials. During this Permit Year, **98 site investigations took place**. Of the opened cases, **64 cases were presented for citation**. A littering case includes a written notice of violation being sent to individuals whose names were collected during the process. Please see **Appendix D**.
- g. The County's DDS staff enforce Zoning and Floodplain regulations. During this Permit Year, **45 zoning violations, 369 weed and litter violations, and one floodplain violation** took place. Please see **Appendix D**.
- h. The Stormwater Program purchased Municipal Pollution Prevention training materials that include information on stormwater BMPs 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 – What We Can Do
 - Construction Activities and Land Disturbance
 - Fleet Maintenance
 - Material Storage and Spill Cleanup
 - Streets and Drainage
 - Parks and Grounds Maintenance
 - Solid Waste Operations

Initial planning began in March, 2020, to provide this training series for appropriate staff in County Departments in conjunction with the Jefferson County Human Resources Department (HRD) via that department's new 360 Articulate training tool, DevelopU. On January 29, 2021, the *Preventing Stormwater Pollution – What We Can Do* training module, which is an overview of stormwater pollution prevention, was assigned to a total of **279 new hires** who had started working for the County 365 days prior, on January 29, 2020. This course was required as part of their onboarding, and they were given 90 days to complete the course. The course was also made available as an elective to all existing County staff. Between October 1, 2020, and September 30, 2021, **181 new hires as well as current staff**, who chose to take the course as an elective, completed the course. Work continued toward preparing the remaining training modules for uploading into DevelopU, developing a spreadsheet of all applicable county job titles / department divisions, obtaining approvals from County compliance and legal staff to implement a County-wide training program, and clearing the way toward launching training assignments to applicable County staff. Currently, plans are for the six remaining training modules to be launched via DevelopU to

appropriate staff early in FY 2022. Please see **Appendix H** for supporting documentation.

- 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. A supply of **175 Good Housekeeping brochures** per month were provided to the Revenue Department from October, 2020 through September, 2021, resulting in a total of **2,100 brochures** for distribution at Revenue's four locations during this reporting period.
- i. The County's Environmental Services Department (ESD) continues 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 a 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 four foot wide by four feet tall and two feet deep and sit on legs six inches 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. A total of **4,191 gallons** was collected between October 1, 2020, and September 30, 2021.

The County's ESD distributed over **5,000 flyers** within apartment complexes, made **five presentations**, provided **bilingual program materials** that were both displayed throughout the complexes and distributed to residents. 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 were visited due to multiple sanitary sewer overflows are targeted. These letters were posted in common areas of the complex as well as included in the Move-In Package for the apartments. Meetings were held with apartment complex managers and property management teams to discuss the ongoing grease issue in several complexes and what can be done to help. Please see **Appendix C and Appendix D**.

4. Construction Site Storm Water Runoff Control

- a. Jefferson County's Subdivision and Construction Regulations, Article 13 Erosion and Sedimentation Ordinance, requires all land disturbing activities to obtain permits or an exclusion as part of the zoning process. Article 13 explicitly requires effective practices from the most recent *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* published by the Alabama Soil and Water Conservation Committee referred to as the Alabama Handbook. The site plans review process includes verification the Alabama Handbook was used and includes consideration of water quality impacts. The County's DDS reviews plans, issues Land Disturbing Activity Permits (or exclusions), and inspects sites for compliance for commercial, industrial, and residential sites. Once staff determines the site to be stable, as specified in the plans, a Certificate of Occupancy is issued, and the permit is closed. Please see **Appendix E**
- b. During the Permit Year 2020-2021, the County's DDS staff issued Land Disturbance Activity Permits for **351 residential single-family homes** as part of its zoning approval process. A total of **40 exclusions for single family homes**, which were exempt from Land Disturbance Permit requirements, were issued. In addition, a total of **21 commercial** Land Disturbance Activity Permits and **one government** construction project. A total of **2,037 construction site inspections** were made of which **139 failed inspections**. The sites that failed an inspection were sent a notice to correct the problem and re-inspected for compliance. Please see **Appendix E**
- c. The County's DDS has **eight 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 include tools and strategies to help achieve and maintain compliance with the Stormwater Permit on all construction sites. The County's RT&D has **three 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**.
- d. The County's RT&D currently implements **eight NPDES permits**, and **one Underground Injection Control Permit** issued by ADEM to the County. Please see **Appendix E**.

5. Post Construction Stormwater Management; New and Redevelopment

- a. On September 10, 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 1, 2020. This adopted ordinance can be found on our website at: https://www.jccal.org/Sites/Jefferson_County/Documents/Development%20Services/Documents/Article%2014%202019-003%20Storm%20Water%20Post-Construction-080420.pdf
- b. During this reporting period, Jefferson County processed and approved 17 qualifying sites for Best Management Practices (BMPs). Each site is at various intervals of

- phasing and construction, and therefore none of the sites have completed construction, submitted As-Builts, nor performed any inspections/maintenance at the end of the reporting period. We will update and report this information as projects are completed.
- c. Jefferson County continued using its Smart Code Ordinance as part of its Comprehensive Planning Program during this reporting period. The Smart Code is intended to be used as a voluntary overlay zone to encourage low-impact development (LID) and to concentrate development in more dense clusters that will limit impervious surfaces, reduce the need for automobile travel, and make the use of public transit possible. The Ordinance is intended to address both new development and the re-development of older areas, to increase density in target areas and to reduce the discharge of pollutants into the MS4. This Ordinance was adopted by the County Commission on October 19, 2010. Please see **Appendix F**
 - d. During the Permit Year 2020-2021, **94 subdivision cases, 42 rezoning cases, and 32 variances were approved.** Please see **Appendix F**.
 - 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. A tree give-a-way was held by the Jefferson County Soil and Water Conservation District in partnership with the Alabama Forestry Commission on March 19, 2021. Reports indicate that **653 trees** were distributed to **86 people**. To keep this event as hands free as possible, people were encouraged to sign up online to place their order with the pickup scheduled for the week after the close of the ordering period.
 - iii. The Mid-HOLT project is a planned four-stage green infrastructure project located in a vacant lot next to the Midfield Fire Station (704 Doctor M.L.K. Jr. Drive, Midfield, AL 35228). This area is along the entrance to the three mile long High Ore Line Trail which connects Midfield to Red Mountain Park. This trail is one of the most used trails in the Red Rock Trail system by people from all over Jefferson County, is in the Valley Creek watershed, and even crosses the creek within the first mile. The project area is perpendicular to a heavily traveled road with no curb and gutter along a low area where all the rain sheet flows to the Eight-foot culvert.

Roadways affect our daily lives in ways that most people may not consider. The visual qualities of a place influence the first impressions of visitors and provide daily enjoyment to residents and commuters alike. The project area was unattractive, retained stormwater, and had some erosion. Because of this and the proximity of this site to the High Ore Line Trail, the project goals were:

- Beautification – Improve the aesthetics of the area leading to the High Ore Line Trail Red Rock Ridge and Trail System. Established in 2015, the High Ore Line Trail links residents of Midfield and west Birmingham to a three-mile off-road walking and biking path, offering residents a chance to take active steps towards a healthier lifestyle.
- Native Plant Usage- Native plants are encouraged due to their tolerance of local weather conditions. Their usage will decrease maintenance costs.
- Creation of Pollinators’ Habitat-A Garden producing pollen seeds and nectar sources to establish food, shelter, and protection. Plants with diverse flower colors and shapes will also help attract a mixture of insects in sizes and foraging habits.
- Stormwater Enhancement- Vegetation to prevent erosion caused by concentrated stormwater runoff. Additional use of wet area tolerant vegetation for phytoremediation.
- Educational Awareness – Creating signage that will provide information on native plant usage, pollination habitat and stormwater enhancement for visiting school kids and residents.

Given the high use of the trail and ability to showcase stormwater friendly practices in a highly visible manner, this site was chosen for the pilot project which includes a total of four planting phases. Phase one, which consisted of planning and planting the **800 square foot High Ore Garden** with nearly **300 pollinator friendly plants** and installation of a bench and concrete pad for the bench located along the sidewalk, was completed during this reporting year.

Phase one was nominated, and awarded, a 2020 Master Gardener Intern Class Project with the Jefferson County Master Gardeners Program. The group project is led by a Jefferson County Stormwater program staff to share knowledge of both stormwater quality and quantity; this staff member, who also is a master gardener and holds a certificate in Native Plant Studies, also provided guidance regarding plants that would be suitable for this project.

On Saturday, November 7, 2020, a total of **33 volunteers participated** in the planting day project. The mayor and two City Councilors from City of Midfield, the Fire Chief along with representatives from Freshwater Land Trust, Jefferson County Soil and Water Conservation District, Jefferson County Department of Health Watershed Protection Division joined the Interns and other Master Gardeners with this project.

On May 5, 2021, a press conference ribbon cutting of the High Ore Garden was held as part of the regularly aired program Red Rock Tuesday on Fox 6’s Good Day Alabama with Jeh Jeh Pruitt. Three live television interviews with the various

stakeholders were held to help promote the project and the stormwater benefits it brings to this site.

The interns host workdays at the garden to help maintain the site. These workdays are opportunities to connect with the trail users to explain the purpose of the site and its benefits as well as educate the Public Works staff on the benefits of the site and on the various plants. As soon as the pandemic is no longer such an obstacle, work will begin to invite and engage the community to assist with the maintenance of the garden and expand into the other phases. During this Permit Year, there were a minimum of **22 workdays**.

Interns and firefighters both have commented on improvement of the soil and its ability to capture and hold the rainwater runoff. The area once prone to erosion is now a beautiful garden full of pollinators.

Funding and materials for **Phase One totaled \$6,185.00** in the amount of cash and in-kind donations from various agencies and businesses. Grants were awarded by the Jefferson County Master Gardeners and the Jefferson County Soil and Water Conservation Foundation and a private donation in the Interns honor was made to the project. The City of Midfield, City of Mountain Brook, Crawford Nursery, Freshwater Land Trust, Jefferson County Commission, Midfield Fire Station, and Petals from the Past all donated expertise, materials, and resources. Please see **Appendix F**.

6. Spill Prevention and Response

- a. For Permit Year 2020-2021, Jefferson County Emergency Management Agency (EMA) had the responsibility for spill prevention and response and responded to **44 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. Training on hazardous materials courses is required for the various staff members. For example, Hazardous Materials Awareness and Operations instructs first responders in the basics of hazardous materials including recognition, protection, safety, and contacts in the case of the presence of hazardous materials. Hazardous Materials Technicians provide further training, including managing and preventing hazardous materials incidents. Hazardous Materials Incident Commander provides training for those individuals responsible for overseeing hazardous materials incidents. Please see **Appendix G**.
- c. On February 10, 2021, 28 Jefferson County employees from various departments attended the Chemical Spill Response Training. Those in attendance include staff from General Services, Environmental Services Department (ESD), DDS, RT&D, and Fleet Management Division. The 8-hr course, conducted by Sigma Consulting and Training, Inc, meets OSHA, EPA, and DOT training standards. It is used for Continuing

Education by ADEM for water and wastewater operators and is approved by the Department of Agriculture and Industries for pesticide applicators. It also satisfies the annual refresher requirement for other Hazmat Training. Please see **Appendix G**.

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, so no exact tonnage is available to report. It is estimated that an average of two 50-gallon bags are collected per day by the street sweeper with an estimated total 500 50-gallon bags collected.
- c. Jefferson County RT&D 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 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 **3 inspections** were performed by DDS staff during the 2020-2021 Permit Year. Please see **Appendix B** for the completed inspection forms.
- e. A pollution prevention video training module series entitled “Preventing Storm Water Pollution: What We Can Do” is available for various Department staff to utilize in training County employees on stormwater BMP’s, illicit discharges, good housekeeping, and targeted pollutants for various activities. The six-video series includes: Introduction – What We Can Do; Construction Activities and Land Disturbances; Fleet Maintenance and Material Handling; Streets and Drainage Maintenance; Parks and Grounds Maintenance; and Solid Waste Management. In addition, a Preventing Stormwater Pollution PowerPoint presentation that briefly summarizes Jefferson County’s permit requirements and actions staff can take at work and at home to reduce stormwater runoff was developed by Stormwater program staff. Initial planning began in March, 2020, to provide this training series for appropriate staff in County Departments in conjunction with the Jefferson County Human Resources Department (HRD) via the department’s new 360 Articulate training tool, DevelopU. Utilizing this training tool will allow staff who perform duties which can affect stormwater quality to be emailed training assignments applicable to their job duties, and then provide them the ability to view and complete the assigned trainings on their computer or handheld device during an allotted time. The DevelopU training tool is a robust platform which makes the training modules available online, allows the modules to be assigned to specific work groups, and creates a database from which reports of what staff took which training when, can be generated on demand. The planning phase to implement these trainings using DevelopU was protracted due to the COVID-19 pandemic, but on January 27, 2021, the first module, What We Can Do, was launched for all new County hires. During the current reporting period, work continued toward uploading all six training modules into DevelopU, developing a spreadsheet of all applicable county job titles/department divisions, obtaining

approvals from County compliance and legal staff to implement a County-wide training program, and clearing the way toward launching training assignments to applicable County staff. Currently, plans are for all six training modules to be launched via DevelopU to appropriate staff early in FY 2022. Please see **Appendix H**.

- f. Inspector trainings are held throughout the year and while ESD staff typically attends training at a conference, this year it was not attended due to COVID-19. Instead, staff attended 16 hours of webcast training in April, 2021, and 46 hours of webcast training in March, 2021. Additionally, on September 23, 2021, approximately **25** people attended a Fats, Oils, and Grease training. Please see **Appendix D**
- g. During the 2018-2019 Permit Year, **two Stormwater Program staff** completed the *Certified Stormwater Inspectors* training course. This certification is good for five years. Please see **Appendix H**.

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 **six 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**.

- 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 fiscal year the GIW Portal promoted and/or held **29 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**.

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 in PDF formats. The main purpose of the newsletter is to provide readers information about critical crop production and pest management information as well as to promote upcoming workshops, events, and webinars that pertain to proper use and alternatives to chemicals, such as beneficial insects. All past issues of the newsletter are available for viewing at the [aces.edu](http://www.aces.edu/blog/topics/ipm-farming/alabama-ipm-communicator-newsletter/) 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 see **Appendix C and Appendix I**.

- 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 see **Appendix C**.
- d. Jefferson County Personnel Board (JCPB) certifies lists of perspective employees for the County. The JCPB requires employees holding positions involving pesticides, herbicides, and fertilizers to obtain and maintain appropriate certifications as a condition of employment. The County has **16 staff** members who are certified PHF Applicators and hold a Certified PHF License. Please see **Appendix B**.
- e. Camp Ketona of the County's RT&D applied herbicides on **3,712.00 acres** of land by using **580.00 gallons of Hard Ball, 3.00 gallons of Milestone, 928.00 gallons of Target, 32.00 gallons of RoundUp, and 8.00 gallons of Trycera, 25.00 gallons of Rodeo Aquatic, 29.00 gallons of Inlet, and 29.00 Gallons of Ground Zero**. Please see **Appendix B**.
- f. Camp Bessemer of the County's RT&D applied herbicides on **7,337.5 acres of land** by using **3.00 gallons of Hard Ball, 73.72 gallons of RoundUp, 15.2 gallons of Milestone, 797.2 gallons of MSMA, 797.2 gallons of 2-4-D, and 61.00 gallons of Inlet**. 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, the GSD applied a minimal amount of RoundUp and Hard Ball during the 2020 – 2021 Reporting Period. It was reported that no fungicide or fertilizer was applied during this time frame.
- h. Camp Ketona of the County's RT&D 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.

- 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**

9. Oils, Toxics, and Household Hazardous Waste Control

- a. The Fleet Management Division (FMD) of the County's RT&D implements a recycling program. For the Permit Year 2020-2021, the FMD properly disposed of **920 batteries, 151.44 tons of scrap metal, 48.97 tons of tires, and recycled 5300 gallons of oil**. Please see **Appendix J**.
- b. Jefferson County 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 by whatever name called.

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

Information about the Grease Control Program, including how to apply for a permit, can be obtained from the County's ESD or downloaded from Jefferson County's website. Some of the materials are available in Spanish.

www.jeffcoes.org/Default.asp?ID=26&pg=Customer+Care

During this reporting period, **2,400 food service facilities** were permitted, and **2,159 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 **43 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 **9 employees** (program staff and inspectors) and offers training classes for food service facility employees to attend on a quarterly basis. Please see **Appendix D**.

- c. A total of **three** Household Hazardous Waste Collection Days were held in various locations throughout Jefferson County. Reports show that **1,242 vehicles were serviced** in these events which collected **more than 46.20 tons of paint and paint related items, 1.80 tons of aerosols, 8.00 tons of pesticides and 0.08 tons of used household cooking oil and grease**. Coordinated through the Jefferson County's Public Information Office, a press release was sent to the County Commissioners and to the local news media. Jefferson County had a paid sponsor advertisement in BhamNow 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 **5,628 full story reads**. Bham Now's Facebook page had **28,749 impressions** and **2,335 engagements**. BhamNow's Instagram page had **2,123 impressions**, and their Twitter page had **1,275 impressions**. The Bham newsletter feature had **2,612 newsletter opens**. A live interview on Talk of Alabama was given by Jefferson County's PIO on Friday, April 23, 2021, to promote the event and encourage residents to participate. Jefferson County also posted the HHW event video on County's Facebook page and listed it as an event. Please see **Appendix J**.

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 April 24, 2021. 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. Educational brochures on illicit discharges and proper vehicle maintenance along with other stormwater information was distributed to the vehicles that participated in these events at the Bessemer location. 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 **14 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 **202 vehicles**.

A second site was located at the Gardendale Frist Baptist Church South Campus at 940 Main Street, Gardendale, AL. A total of **43 volunteers**, city staff, Jefferson County Department of Health Staff, county staff as well as at least **18 vendor staff** registered

and participated in the event at this location. Intake forms were collected from **395 vehicles**.

A third site was located at the Classic Car Motoring, 3900 Grants Mille Road, Irondale. A total of **33 volunteers**, city staff from Birmingham and Irondale, Jefferson County Department of Health, and County staff as well as at least **28 vendor staff** registered and participated in the event at this location. Intake forms were collected from **645 vehicles**.

- d. A combined total of **17.69 tons of electronics** were collected from **three Electronic and Rechargeable Battery Take-back Day events** held for residents of Jefferson County. Reports show that **613 households** participated in these events which were sponsored by the Jefferson County Commission in partnership with Alabama Cooperative Extension System, City of Bessemer, City of Birmingham, City of Leeds, Jefferson County Conservation District, Jefferson County Department of Health, Keep Birmingham Beautiful, Nucor Steel, Inc., Protec, and Storm Water Management Authority, Inc. An intake survey was administered, and all participants received a reusable car trash bag, or a litter quitters backpack filled with educational materials from all the partners. Materials that were distributed included reusable car trash bags filled with informational materials were distributed to the first 200 attendees at each event. The following materials were included in the bags: Jefferson County Household Oil and Grease Recycling Program site locations, Fat Free Sewers brochure, Recycling Electronics Protects Gorilla Habitat flyer, Helpful Information brochure, Lunch & Learn flyer, Household Hazardous Waste event flyer, Litter Quitters stickers and website QR code, Jefferson County Conservation District photo contest flyer, and Jefferson County Conservation District brochure. In addition, fabric car litter bags, 2021 Stormwater Calendars, and boxes of household garbage bags were distributed to attendees. These events were held in areas prone to illegal dumping to proactively circumvent the improper disposal of electronics and batteries. Events were promoted by all partners and other local agencies. Details from each event are listed below. Please see **Appendix J**.
- On March 6, 2021, an event was held at The Birmingham Zoo parking lot. Intake forms were collected from **368 vehicles** representing **442 households** located within **23 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 **12.04 tons** of electronics were collected. The local news media ABC 33/40 attended the event and interviewed staff from Jefferson County Department of Health and the City of Birmingham. This interview was aired during local news segments on the evening news. 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 **402 people with 43 engagements; 143 engagements were made thought LinkedIn**.
 - On May 15, 2021, an event was held at the Jefferson County CenterPoint satellite courthouse parking lot. Intake form information was collected from **86 vehicles** representing **102 households** located within **16 jurisdictions** in **22 unique zip codes**. A total of **29 volunteers** from partnering agencies along with

the Village Creek Society assisted with the unloading of vehicles. A total of **2.84 tons** of electronics were collected. Breakfast for the volunteers were provided by Hardee's Restaurants LLC. This event was promoted by the Jefferson County Public Information Officer on the County's Facebook and Twitter accounts.

- On Jun 12, 2021, an event was held at the Jefferson County Valley Creek Water Reclamation Facility – Bessemer. Intake forms were collected from **60 vehicles** representing **69 households** located within **18 jurisdictions** in **30 unique zip codes**. A total of **24 volunteers** from partnering agencies assisted with the unloading of vehicles. A total of **2.81 tons** of electronics were collected. Bham Now did a feature article on this event. Local news media from WBRC Fox 6 News attended the event and interviewed staff from Jefferson County Stormwater program. This interview was aired during local news segments on the evening news. This event was promoted by the Jefferson County Public Information Officer on the County's Facebook and Twitter accounts.
- 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 see **Appendix N**.
- f. Stormwater Program staff promoted **two National Prescription Drug Take-Back Events** held in the Jefferson County area on October 24, 2020, and April 24, 2021. The Jefferson County Sheriff's Office offers two locations in Jefferson County for any resident to bring in items. In addition, prescription drugs were accepted at the Household Hazardous Waste Day event on April 24, 2021, at all three sites where reports show that **0.10 tons** were collected. 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 **3.56 tons** of medication was collected statewide during the October, 2020, event, and over **2.55 tons** were collected at the April, 2021, 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 21, 2012. The proposed regulations seek to implement the Secure and Responsible Drug Disposal Act of 2010.

Jefferson County PIO and the Jefferson County Stormwater Program promote these events on social media outlets and the JeffCoH₂O newsletters. 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**.

10. Industrial Storm Water 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). Santek Waste Services, LLC was acquired by Republic Services, Inc in May 2021. 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 RT&D implemented **two NPDES Industrial Permits** issued by ADEM to the County. Please see **Appendix K**.

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.
- 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 to be recognized at the Alabama PALS Governor’s Awards Program scheduled to be held on November 18, 2020, for its outstanding commitment in the areas of local cleanup efforts, environmental education, and volunteerism. Due to students and groups not being able to attend due to COVID-19 restrictions and safety requirements over social distancing the event was cancelled. Jefferson County RT&D, Keith Golden, Jonika Smith, Adger Community, Minor High School, Minor Middle School, Oak Grove High School, Woodlawn High School, Ramsay High School, G.W. Carver High School, Red Mountain Heights Community, and the Martintown Raimund Community all received awards in their respective categories. Please see **Appendix C**.
- A particular strength during the COVID-19 pandemic was Jefferson County establishing its digital permitting portal by providing a non-contact option for customers. Customers are provided the option to submit site plans, architectural drawings, permit applications, tad applications, and building applications digitally. Customers can save time and safely upload all required documentation. This digital permitting space, ePermitHub, has allowed

Jefferson County to enhance and continue to provide customer service despite the variable peaks and lows of the global pandemic.

- A limitation of the Jefferson County Stormwater Program is its current water quality monitoring data. Furthermore, the climate during the year was not conducive for collecting all planned samples, much like that of years past. Jefferson County experienced severe weather, tornados, and flooding for days on end, all adverse events that created dangerous conditions for personnel. Jefferson County and much of Alabama experienced drought conditions for much of the previous Permit period; however, this reporting period experienced quite the opposite. Continuous wet weather inundated Jefferson County, setting records for rainfall. One after another, meteorologists, statistics, and news reports documented weather extremes statewide. **Appendix L** includes supporting documentation of the adverse climatic conditions which prohibited the collection of all samples.
- A second limitation of the Jefferson County Stormwater Program is the way in which the County is geographically situated and politically structured. While the County has the authority over unincorporated areas of Jefferson County, this authority has been removed in incorporated areas and left to individual jurisdictions. There are no consistent programs, regulations or standards for monitoring that assist the County with its evaluation of water quality improvement.
- With the economic downfall from the COVID-19 pandemic, budget cuts were implemented and will be impacting the Stormwater Program and other county departments.

E. FUTURE DIRECTION

- Work began during this reporting period with the Stormwater staff and Accela Development Services staff members to establish a Building-Erosion Control combo permit. This practice will greatly reduce the review times for permit review staff and will streamline the permitting process for review staff and field staff alike. It will also reduce the number of records needing to be managed and related within Accela. Staff will be able to manage both item sets in one record file type instead of two. Further development and refinement will take place prior to launching this combo permit type within the new reporting period.
- Work was completed in partnership with the Alabama Cooperative Extension System, City of Birmingham, City of Bessemer, City of Leeds, Jefferson County Soil and Water Conservation District, 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 2021-2022 Permit Year. The calendar features both Stormwater program elements such as Non-point Source pollution, proper disposal of HHW, and illicit discharges as well as various 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 Stormwater Program element or a LID/GI practice has been highlighted which emphasize proper disposal and report of items as well as water conservation and the use of various features to collect, store and filter the rain into the ground to prevent runoff. A poster, created by the Environment America Research and Policy Center, was used for the centerfold of the calendar that highlights an infographic showing how investments in stormwater practices can help protect our local waterways. These investments include items that homeowners can install such as rain gardens, constructed wetlands, vegetative buffers, and the use of native plants and 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. 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 as well as locations.
- Work began during this fiscal year to create three new educational brochures that provide information on E-Waste, the potential issues with bare ground and earth moving practices, and ways homeowners can reduce stormwater impact on their properties.
- Work began with the Roads and Transportation department contracting Hydro Engineering consultant firm to develop the Jefferson County Watershed Modeling Program-Phase 1 (Upper Cahaba River Watershed, Lower Cahaba River Watershed, Little Cahaba River Watershed, and Patton Creek-Cahaba River Watershed).
- Work will begin to determine the financial feasibility of establishing a citizen water quality monitoring program within Jefferson County with Alabama Water Watch as an affiliate. Please see **Appendix N**.

F. EFFECTIVENESS OF SWMPP

- During this reporting period, 110.10 tons of litter was removed from Unincorporated Jefferson County roadways and waterways
- During this reporting period, 17.69 tons of electronics were collected
- During this reporting period, 4,191 gallons of used cooking oil and grease were collected
- During this reporting period, 9,939.13 cubic yards of material removed from storm sewer system
- During this reporting period, 460 bags and 857.51 tons of trash was removed from roadside
- During this reporting period, 920 batteries, 5300.00 gallons of motor oil, 151.44 tons of scrap metal, and 48.97 tons of tires were recycled
- During this reporting period, over 6.11 tons of medication was collected statewide
- During this reporting period, 413 erosion control permits were issued, and 40 residential exclusions were issued
- During this reporting period, 2,037 construction inspections were performed
- During this reporting period, 414 violations for zoning, weed and litter, and floodplain were issued
- During this reporting period, wet-weather sampling for Village Creek resulted in reduction in total suspended solids and metals
- During this reporting period, the effectiveness of the Public Education and Involvement Program was assessed through public survey and questionnaire

G. ACTIONS NOT ACCOMPLISHED

- There were fewer wet weather samples collected due to inclement weather. This is also expounded on within Section D: Program Strengths and Weaknesses. Documentation for the record setting rainfall is in **Appendix L**

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	Three 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	9,939.13 cubic yards removed from ditches	Appendix B
	Operate and maintain to minimize MS4 to remove pollutants	Refuse, litter, and debris removal	Implemented	Roads and Transportation Department removed 460 bags and 857.51 tons of trash from roadside; 111.10 tons of litter was removed from Unincorporated Jefferson County roadways and waterways in 69 cleanups by 1,510 volunteers	Appendix B
	Operate and maintain to minimize pollutants	De-icing activities	Implemented	Jefferson County applied 27 tons of sand on as-needed basis	Appendix B

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities</i>	<i>Status: In Progress / Implemented</i>	<i>Status Results of Activities During Current Permit Year</i>	<i>Comments / Appendix</i>
Public Education / Public Involvement	Inform and involve groups with the Stormwater Program	Partners / formalized agreements	Implemented	Participation in 16 partnering organizations with five formalized Agreements in form of Memorandum of Understandings	Appendix C and N
	Communication mechanisms and advertisements	Printed and electronic materials	Implemented	2,100 brochures distributed; 207 flyer / brochure downloads; 5,000 stormwater calendars distributed; 25 monitor slides were displayed; four quarterly newsletters; 28 posters displayed; one website	See Appendix C
	Structural controls to reduce pollutant discharge	Stormwater inlet covers and road sign placements	Implemented	37 stormwater inlet covers stamped; 10 road signs installed	See Appendix B
	Individual participation in litter removal activities	Litter, floatable and debris removal	Implemented	111.10 tons of litter was removed from Unincorporated Jefferson County roadways and waterways in 69 Cleanups by 1,510 volunteers	See Appendix C

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities</i>	<i>Status: In Progress / Implemented</i>	<i>Status Results of Activities During Current Permit Year</i>	<i>Comments / Appendix</i>
Public Education / Public Involvement Cont.	Inform and involve the public on litter reduction and removal	<i>Litter Quitters:</i> public high school anti-litter video competition with television and radio ads and billboards	Implemented	90 students from 11 schools viewed Litter Quitters PowerPoint Presentation, Litter Quitters website received more than 5,034 views during 12-day competition, seven live media interviews; seven printed ads / article published; three 30-second radio adds; three digital billboards advertisements; 11 students from various schools were represented in one 30-second television message; 8,301,843 impressions	See Appendix C
	Inform and involve the public on stormwater pollution prevention	Complaint reporting, community events, presentations, workshops, and seminars	Implemented	Five events with approximately 1,1547 people; 24 presentations were given to 472 people; 17 workshops and seminars were held with 1,394 attendees	See Appendix C

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities</i>	<i>Status: In Progress / Implemented</i>	<i>Status Results of Activities During Current Permit Year</i>	<i>Comments / Appendix</i>
Public Education / Public Involvement Cont.	Inform and involve staff on stormwater topics	Staff development and training	Implemented	Staff participated in more than 20 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	36 hotline calls and email notifications were received; six illicit discharges investigated; three corrective actions taken	See Appendix D
	Detect and eliminate illicit discharges	Investigations and enforcement proceedings for illegal dumping, zoning and weed and litter violations	Implemented	98 site investigations; 748 zoning cases, 64 cases were presented for citation; 45 zoning violations, 369 weed and litter violations, and one floodplain violations	See Appendix D

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities</i>	<i>Status: In Progress / Implemented</i>	<i>Status Results of Activities During Current Permit Year</i>	<i>Comments / Appendix</i>
Illicit Discharge Detection and Elimination cont.	Detect and eliminate illicit discharges	Good Housekeeping brochures distributed to businesses	Implemented	Approximately 2,100 brochures distributed to individuals applying for or renewing business licenses	See Appendix C
	Detect and eliminate illicit discharges	SSO reporting	Implemented	Complete listing of SSO and actions taken by staff	See Appendix D
	Detect and eliminate illicit discharges	Household used oil and grease recycling	Implemented	23 drop off points with 4,191 gallons of used cooking oil and grease were collected; distributed 5,000 flyers within apartment complexes and made five presentations about program	See Appendix D
Construction Site Storm Water Runoff Control	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	Implemented	413 Land Disturbing Permits were issued: 21 Commercial permits, 351 Residential permits, and one 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	40 Exclusions were issued: zero Commercial exclusions and 40 Residential exclusions	See Appendix E
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	Implemented	2,037 construction inspections were performed: 193 failed inspections	See Appendix E
	Reduce pollutant discharge from construction sites	Staff training as Qualified Credentialed Inspector (QCI)	Implemented	Eight DDS staff certified; three RT&D staff certified	Appendix E
	Reduce pollutant discharge from construction sites	Inspection of Jefferson County NPDES construction sites	Implemented	Six 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	94 subdivision cases, 42 rezoning cases, and 32 variances were approved	Appendix F
	Assess impacts on water quality	Land use plan	Implemented	Zero public hearing/open house held	N/A
Spill Prevention and Response	Prevent, contain, and respond to spills	Conduct spill response	Implemented	EMA responded to 44 spills	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, so no exact tonnage is available to report	N/A
	Prevent and reduce discharges from Country operations	Implement inspections at fueling facilities	Implemented	50 inspections were performed (five facilities once a month)	Appendix H
	Prevent and reduce discharges from Country operations	BMP pollution prevention training	Implemented	181 staff attended Stormwater Pollution Prevention video; nine staff attended FOG training; two 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	Six events promoted by AGITC; 29 events promoted by GIW; 16 staff hold a Certified PHF License	Appendix B and I

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities</i>	<i>Status: In Progress / Implemented</i>	<i>Status Results of Activities During Current Permit Year</i>	<i>Comments / Appendix</i>
Application of Pesticide, Herbicide, and Fertilizer	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	Implemented	Chemicals are stored in secure, climate-controlled warehouses. Inspections took place but not quantified	Appendix I
	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	Implemented	3,381.32 gallons of herbicides were applied along 11,049.5 acres (Camp Ketona applied 1,634 gallons; Camp Bessemer applied 1,747.32 gallons; General Services applied minimal gallons)	Appendix B and I
	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	Implemented	No fertilizer was reported to have been applied	N/A
Oils, Toxics, and Household Hazardous Waste Control	Identify and control pollutants in stormwater discharges	Jefferson County Fleet Management in-house recycling program	Implemented	920 batteries were recycled; 21, 200 quarts of motor oil were recycled; 151.44 tons of scrap metal were recycled	Appendix J

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities</i>	<i>Status: In Progress / Implemented</i>	<i>Status Results of Activities During Current Permit Year</i>	<i>Comments / Appendix</i>
Oils, Toxics, and Household Hazardous Waste Control	Identify and control pollutants in stormwater discharges	Jefferson County Grease Control Program for food service facilities	Implemented	2,400 food service facilities were permitted, 2,159 annual site inspections, and 43 sites were non-compliant	Appendix H
	Detect and eliminate discharges to the MS4	Household Hazardous Waste collection event for public	Implemented	Three locations held; 1,242 households participated. 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	Three events held, 613 households participated; 17.69 tons of electronics, were collected	Appendix J
	Detect and eliminate discharges to the MS4	National prescription drug take-back event	Implemented	Two national events held; nearly 6.11 tons of medication were 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	One landfill and two transfer station inspections conducted; three NPDES Industrial Permitted sites; 0 SARA Title III, Tier II	Appendix K
Monitoring Program	Detect illicit connections and improper discharges to the MS4	Dry weather screening	Implemented	23 Instream sites sampled	Appendix L
	Detect illicit connections and improper discharges to the MS4	Wet weather screening	Implemented	Five Instream sites sampled	Appendix L
	Detect and eliminate discharges to the MS4	Wet weather investigative monitoring	Implemented	Two 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	98 site investigations; 64 cases were presented for citation; 748 zoning approvals issued, and 414 violations issued for zoning, weed and litter, floodplain	Appendix D
	Erosion Control Permits	Erosion and sediment control permits / exclusions issued	Implemented	413 Erosion Control Permits; 40 Exclusions	Appendix E
	Erosion Control inspections	Erosion and sediment control inspection activities	Implemented	2,037 construction inspections were performed; 193 failed inspections reported	Appendix E
	Subdivision and Construction	Subdivision and Construction Regulation	Implemented	94 subdivision cases, 42 rezoning cases, and 32 variances were approved	Appendix F

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

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

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

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

IV. Monitoring Section

Monitoring and Reporting

Jefferson County began its own Stormwater Program at the beginning of Permit Year 2009-2010. Initially, staff reviewed the unincorporated area of Jefferson County 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 Rd (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 Rd (33.32568, - 86.94914) with land use characterized predominantly as undeveloped, agricultural, with a few light industrial areas. The HUC12 watershed basin size is 44,458 acres. Two sites on Turkey Creek are monitored and the combined watershed basins are 54,770 acres. One is within the Jefferson County Water Reclamation Facility property near Narrows Rd (33.70938, -86.69634) and the land use is largely characterized as undeveloped, agriculture, low density residential, and recreation. The second site is located near Doss Hollow Rd (33.75665, -86.8254) having similar land use characteristics as the first. The sampling site on Valley Creek was relocated February, 2021 and is downstream of the tower at the Valley Creek Water Reclamation Facility (33.392889, -87.003089). The land use upstream of the site is characterized as undeveloped, low, and medium density residential, commercial, and heavy industry. The HUC12 watershed basin for this site is 26,746 acres. The location of the Village Creek site is near Minor Pkwy (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 2020-2021, Stormwater Program staff collected instream samples for wet and dry weather screening and investigation sampling. This information is summarized and quantified in the Summary Tables. The raw data analyses along with graphical charts, to include the current reporting period along with the past five years is included in **Appendix L**. Narrative Field Data Sheets completed at the time of sample collection are available upon request. The laboratory analyses for the parameters were performed in accordance with 40 CFR Part 136 as required by Permit ALS000001. Establishment of trends in stormwater pollutant concentrations depends on a vast amount of water quality data. There were fewer wet weather samples collected compared to dry weather samples due to inclement weather as mentioned in the Program Strength and Weaknesses section of this report. Moreover, there were many instances where a graph could not be created due to the analyses being below measurability. The analytical results were graphed for each monitoring location and a trendline was formulated to interpret the results. Except for Turkey and Village Creeks, total suspended solids during wet weather decreased in the other three creeks indicating water quality improvement over time. There were no instances in all the creeks where the pH exceeded water quality standards for the ADEM Fish and Wildlife use classification in both dry and wet weather.

Jefferson County has two creeks with approved TMDLs. The Shades Creek TMDLs apply to pathogens, siltation, and habitat alteration, while the Village Creek TMDLs apply to metals, siltation, pathogens, and habitat alteration. Analysis of E. coli in Shades Creek indicated there was one instance of elevated colonies during wet weather sample collection this reporting year. This is

understandable as the sampling location is surrounded by agricultural land use with livestock. 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 barium, Village Creek sustained a decrease in concentrations of metals during dry weather. A decrease in all metals in the wet weather samples collected in Village Creek was noted demonstrating water quality improvement. Total suspended solids in Village Creek during dry weather showed consistent decreasing concentrations over time. Data is limited for wet weather samples of total suspended solids in Village Creek due to weather anomalies in years past that have been documented and submitted in previous Annual Reports. Pathogens, measured by E. coli colonies, were consistently low during dry weather. Only one E. coli sample was collected from Village Creek during wet weather; therefore, water quality improvement or degradation cannot be determined at this time.

V. Stormwater Management Plan / Program Modifications

PROGRAM MODIFICATIONS

- Work will continue the Post Construction program given the passing of Article 14.
- Work will continue with EMA and the local Fire Departments on establishing the Pre-Fire Plan Check List to include an acknowledgement of conveying information regarding potential sources of stormwater pollution.
- Jefferson County relocated the monitoring site in Valley Creek due to safety concerns for staff. The new location (VC4) is outside the Valley Creek Water Reclamation Facility and a map of the site, along with the coordinates, was updated in the SWMPP (Please see Appendix A).

VI. Inspection and Enforcement

- a. The County's Development Services Department issued **748 zoning approvals** and received complaints related to weed and litter, criminal littering, and zoning violations. During this reporting period, **414 notices of violation** (45 zoning, 369 weed and litter) were investigated. Please see **Appendix D**.
- b. During the Permit Year 2020-2021, the County's DDS staff issued Land Disturbance Activity Permits for **351 residential single-family homes** as part of its zoning approval process. A total of **40 exclusions for single family homes** which were exempt from Land Disturbance Permit requirements were issued. In addition, a total of **21 commercial** Land Disturbance Activity Permits were issued and 1 **government** construction project. Please see **Appendix E**.
- c. A total of **2,037 Erosion and Sediment Control Inspection activities** were performed for the Land Disturbance Activity permitted sites with **193 failed inspections** during the Permit Year 2020-2021. This number includes the 33 escalated written 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 **98 criminal littering site investigations** took place. Of those opened cases, **64** cases were presented for citation. A littering case includes a written notice of violation being sent to individuals whose names were collected during the process. Please see **Appendix D**.

VII. Public Education

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

VIII. Fiscal Analysis of Permittees' Program

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