

JEFFERSON COUNTY COMMISSION

MUNICIPAL SEPARATE STORM SEWER SYSTEM

PERMIT NUMBER: ALS000001

ANNUAL REPORT FOR REPORTING PERIOD OCTOBER 1, 2012 TO SEPTEMBER 30, 2013

Jefferson County Commission

Commissioner David Carrington-President
Commissioner Sandra Little Brown-President Pro Tempore
Commissioner George Bowman
Commissioner T. Joe Knight
Commissioner Jimmie Stephens

Tony Petelos, Chief Executive Officer

Zhaleh M. McCullers, Director
Storm Water Management Department





I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations (NPDES PERMIT ALS000001, Section VI (B)(4)(H) dated October 12, 2001).

Tony Petelos
Tony Petelos, Chief Executive Officer

12-16-13
Date

Zhaleh M. McCullers
Zhaleh M. McCullers, Director

12.13.2013
Date

ANNUAL REPORT - Year Eleven
October 1, 2012 to September 30, 2013

TABLE OF CONTENTS

I. GENERAL INFORMATION

A. Contacts

II. PROGRAM EVALUATION

A. Program Objectives

B. Major Findings

C. Major Accomplishments

D. Program Strength and Weaknesses

E. Future Direction

F. Program Modifications

III. SUMMARY TABLE

IV. PROGRAM MODIFICATIONS

V. FISCAL ANALYSIS OF PERMITTEE'S PROGRAM

VI. APPENDICES

A. Stormwater Management Plan

B. Structural Controls; PHF; Roadways

C. New Development and Redevelopment

D. Illicit Discharges / Spill Response and Reporting

E. Industrial and High Risk Runoff Program

F. Construction

G. Education and Public Outreach

H. Monitoring

I. Budgets

I. General Information

A. CONTACTS

The staff of the Jefferson County Commission, under the supervision of Tony Petelos, Chief Executive Officer, responsible for all the County Department functions and responsibilities, and Zhaleh M. McCullers, Director of the Storm Water Management Department (SWMD) prepared this 2012-2013 Annual Report. The staff of SWMD collected and coordinated information from the various Jefferson County Departments for inclusion in this report.

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

Zhaleh M. McCullers

Director

Garry O. Miller

Chief Civil Engineer

**Jefferson County Courthouse
Storm Water Management Department Room, B-210
716 Richard Arrington Jr. Blvd. N.
Birmingham, Alabama 35203
Telephone: 205-325-8741
mccullersz@jccal.org
millerg@jccal.org
<http://jeffonline.jccal.org/>**

II. Program Evaluation

A. PROGRAM OBJECTIVES

The requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit ALS000001 (Permit), issued by the Alabama Department of Environmental Management (ADEM), list specific responsibilities for the Permittee/Co-Permittees. The Storm Water Management Department (SWMD) is responsible for implementing the Storm Water Management Plan (SWMP) within unincorporated Jefferson County, Alabama. The SWMP stipulates certain obligations that must be met in order for the Permittee to comply with the requirements of the Permit. The SWMD continued its work in accordance with the latest SWMP that was submitted to ADEM in the 2011-2012 Annual Report. Work implemented by other County departments which fulfills parts of the MS4 NPDES Permit requirements is reported by the SWMD in its Annual Report. Please refer to Appendix A for the latest version of the SWMP.

B. MAJOR FINDINGS

During the Permit Year October 1, 2012, through September 30, 2013, the following information was collected and evaluated as major findings that have impacted water quality:

- As the economy improves, housing starts are increasing, although minimally. Many of the new houses are being built in subdivisions that were dormant during the recession. Although these subdivisions tended to stabilize by natural vegetation, the completed housing sites further stabilized these properties. This minimal development combined with maturing natural vegetation is minimizing the impact on the environment from these previously disturbed areas.
- According to the final 2012 water quality 303(d) list of ADEM and the EPA, 17 stream segments of waterways within, or flowing through, the Jefferson County jurisdiction are designated as impaired by not fully meeting their usage classification. This is a determination reached by ADEM in a federally required biennial evaluation of the status of water bodies within the state. The evaluation is conducted from best available data and a determination of the waterway's ability to support its designated usage classification.

The five impaired stream segments within the Cahaba River watershed are generally included on the 303(d) list because of excessive pathogens, siltation, and habitat alterations due to urbanization runoff components and storm sewers. The twelve segments on the 303(d) list in the Black Warrior River basin are typically designated as impaired for some of the above mentioned reasons but also include such chemical impairments as pesticides (Dieldrin), mercury, nutrients, organic enrichment, ammonia, pH, and metals from atmospheric deposition, surface and subsurface mining operations.

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,
- Camp Branch for pH, siltation, and habitat alteration,
- Patton Creek for organic enrichments and dissolved oxygen problems.

The EPA has approved the finalized Cahaba River TMDL for siltation. The total reduction in total suspended solids was revised from 53% to 48%. As an MS4 entity, Jefferson County will continue to address pollutant loading through proper BMPs, monitoring, stormwater management plans, and other mechanisms included in the Permit.

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

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

C. MAJOR ACCOMPLISHMENTS

The following list outlines major accomplishments during the Permit Year October 1, 2012, through September 30, 2013 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 maintains the storm sewer system within the unincorporated Jefferson County rights-of-way. During the reporting period, **6,641 cubic yards** of material were removed from the storm sewer system. Please see Appendix B.
- b. Stormwater Program staff, along with other agencies, developed, promoted and implemented numerous workshops to promote structural controls on individual home sites. Jefferson County Commission formalized several ongoing Memorandums of Understanding with local, state and national agencies with similar goals. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix I.
- c. The Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

2. Areas of New Development and Significant Redevelopment

- a. Jefferson County continued using its SmartCode Ordinance as part of its Comprehensive Planning Program during this reporting period. The SmartCode is intended to be used as a voluntary overlay zone to encourage low-impact development (LID) and to concentrate development in more dense clusters that will limit impervious surfaces, reduce the need for automobile travel, and make the use of transit possible. The Ordinance is intended to address both new development and the re-development of older areas, to increase density in target areas and to reduce the discharge of pollutants into the storm sewer system. This Ordinance was adopted by the County Commission on October 19, 2010. Please see Appendix C.
- b. During Permit Year 2012-2013, **28 subdivision cases were approved**. Please see Appendix C.
- c. Jefferson County is located in a region which experiences the impacts of severe weather conditions including tornados, hurricanes, and heavy rainfall. Several areas of the County which were impacted by the 2011 and 2012 tornado outbreaks suffered extensive loss of trees and vegetative cover, leaving them vulnerable to the associated impacts of stormwater runoff. In order to minimize the discharge of pollutants from these areas, the Stormwater Program staff has identified resources, coordinated efforts, and implemented projects to assist affected communities in replanting trees and other plants to restore the benefits that such vegetation brings, including reducing stormwater runoff, capturing and filtering pollutants, increasing stormwater infiltration, and reducing soil erosion.
 - i. Alabama Forestry Commission/Arbor Day Foundation's Tornado Recovery was created to assist 58 communities throughout north Alabama over a three year

period. The campaign aims to speed recovery of the area's trees and forests. Areas damaged by the April 2011 tornados applied for assistance in the Alabama Tree Recovery Campaign. Since trees are nature's water filters, capable of cleaning up the most toxic wastes including solvents and organic wastes, it was important to promote the replanting of trees lost by the tornados both in April 2011 and January 2012. Seedling giveaways were held in various locations throughout the County during this Permit reporting period and an estimated **4,168 seedlings** were distributed and planted. Please see Appendix C.

- ii. The Stormwater Program staff began planning a three year project to replant trees and shrubs in the North Smithfield Manor Green Leaf Heights Community. The local park and fire station took a direct hit from the 2011 tornado which wiped out every tree and shrub. Free seedlings will be available to residents during the planting event.
- iii. The Plant Dig, hosted by Keep Birmingham Beautiful Commission, the Birmingham Department of Public Works, and Alabama Forestry Commission, was held on February 23, 2013. This event was free to the public allowing citizens to dig up trees and shrubs at a Birmingham facility and replant them in their own yards. Please see Appendix C.
- d. The Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

3. Roadways

- a. The County's Roads and Transportation Department deicing program was implemented by Camp Bessemer and Camp Ketona. A total of **210 tons** of sand was applied during this reporting period for ice control on County roadways. Please see Appendix B.
- b. The Turkey Creek Nature Preserve (TCNP) led several cleanups and removed over **two tons** of debris. The Jefferson County Commission and the TCNP work together under an ongoing formalized Memorandum of Understanding to reduce water quality pollution along roadways. There also were several local school and service organization volunteers participating in the events. Please see Appendix B and I.
- c. Two *Renew Our Rivers Cleanups* were scheduled during Permit Year 2012-2013. **Seventy five volunteers** removed **two full large dumpsters** of trash and debris from the Warrior River Bankhead Lake Cleanup held on June 1, 2013 and a community wide cleanup was promoted to have local residents pick up trash and debris along roadsides and in sloughs from May 29 until June 1, 2013.

Volunteers with the Birmingham Fire and Rescue Service and Vulcan Materials Company participated in a cleanup in Village Creek conducted by the Village Creek Society and the Alabama Power Company on September 28, 2013. Since 2006, volunteers have removed more than 54 tons of trash and debris from the creek. An additional cleanup on Village Creek was held on May 11, 2013. **Ninety-six volunteers** from local schools removed **2.11 tons** of debris. Please see Appendix B.

- d. The Valley Creek Cleanup was held on August 17 with two prior work days to remove the heavier items on August 15 and 16, 2013. This cleanup focused on public awareness and trash removal throughout the Valley Creek Watershed. The cleanup was coordinated by the municipalities throughout the watershed and various agencies and a coalition of local citizens and businesses. A total of **150 volunteers** removed **30.4 tons** of debris. Please see Appendix B.
- e. Stormwater Program staff developed a partnership with People Against a Littered State (PALS) promoting and coordinating the 2013 “Don’t Drop it On Alabama” statewide Spring Cleanup for Jefferson County held on April 27, 2013. PALS reports that 62 counties and 27 statewide locations helped pickup over 270 tons of litter. In Jefferson County, **241 volunteers** spent over **750 hours** picking up **1,062 bags** of litter along roadways and out of ditches. The County’s Roads & Transportation Department (R&TD) picked up and properly disposed of the material collected in the unincorporated areas of Jefferson County. The amount of material collected is contained in the County’s R&TD yearly tonnage report under material debris removed from ditches. Please see Appendix B.
- f. The Shades Creek Cleanup was held on September 28, 2013. Over **120 volunteers** came to remove tires and trash out of the watershed. Please see Appendix B.
- g. An article was written and published in a local newspaper reminding citizens that litter is not a landscape design, ‘fixing up’ your yard includes picking up and properly discarding trash and debris. Please see Appendix B.
- h. The Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

4. Flood Control Projects

- a. During this Permit year, **no flood control projects** were permitted. Please see Appendix B.
- b. Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

5. Pesticides, Herbicides and Fertilizer Application

- a. Camp Ketona and Camp Bessemer of the County’s Roads and Transportation Department applied herbicides on **3678.70 acres** of land by using **150 gallons of Hard Ball, 290 gallons of RoundUp, 47.5 gallons of Milestone, 432.5 gallons of MSMA, and 432.5 gallons of 2-4-D**. Please see Appendix B.
- b. The County’s Roads & Transportation Department has **four staff** members who are **certified PHF applicators** and hold a certified PHF license: Robert Carroll (10722), Robert A. Ryan (10992), Christopher Hayes (11037), and Stephen Goodwin (11186). Please see Appendix B.
- c. Camp Ketona of the County’s Roads & Transportation Department 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 locked at all times with a 24 hour guard. The second storage location is a 10' x 10' area in the downstairs of the Bridge Division which is kept locked and secured.

- d. During Permit Year 2012-2013, the County's General Services Department Standard Operating Procedures (SOPs) were followed for pesticides, herbicides and fertilizers, including: disposal, hygiene, symptoms of poisoning, mixing and loading, and recognition and management. Please see Appendix B.
- e. The Operation Center in the Grounds Area of General Services stores its chemicals in a secure location inside an OSHA approved storage cabinet. For a list of materials and amounts, please see Appendix B.
- f. The County's General Services Department applied only herbicide products to control weeds and a pesticide to control fire ants for different County facilities. No fungicide or fertilizer was applied for the 2012-2013 reporting period. For product names and amounts, please see Appendix B.
- g. The County's General Services Department has **two staff** members who are **certified PHF applicators** and hold a certified PHF license: Rhonda Cashatt (11946), and Keith Kelley (12036). Please see Appendix B.
- h. Local governments are prohibited from passing ordinances regulating pesticides in 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 must pass a certification exam and maintain the license to legally operate in Alabama. Please refer to Major Accomplishments, Industrial High Risk Runoff (II.C.8) and see Appendix B.

During the 2011-2012 Permit Year, Jefferson County Commission formalized an ongoing Memorandum of Understanding with the Alabama Green Industry Training Center (AGITC) through the Alabama Cooperative Extension System (ACES). This year AGITC promoted and held **120 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.

The AGITC web site has links to free safety videos for both English and Spanish speaking work crews. The web address is <http://ugaurbanag.com/safety/general-guidelines-landscape-equipment-safety>.

During this reporting period, the AGITC **launched the Green Industry Web (GIW) portal**. The GIW is a free web-based portal 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. The

project 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 AGITC and many more. Year One goals include designing and developing web-based support materials for state license exam preparation for existing and future Green Industry employees, providing web-based support and credentialing in Landscape Management and Urban Forestry for 300 agriculture teachers and their 40,000 high school students, and conducting 30 days of hands-on training across the state. Please see Appendix B and I.

- i. The Alabama Cooperative Extension System launched the Certified Horticultural Retailer (CHR) training program during this Permit year. This statewide educational initiative targets agricultural retailers and managers who sell pesticides, fertilizers and seeds. The CHR program delivers multi-track training on nutrient management, pesticide stewardship, conventional production systems, organic cropping systems, landscape horticulture and fire ant management. Participants will receive relevant Extension publications, a training certificate and badge and lawn displays upon program completion. They will also be linked to the CHR website that recognized businesses that have successfully completed the training program. It was reported that **11 people** attended the Spring 2013 trainings. During the 2011-2012 Permit Year, Jefferson County Commission formalized an ongoing Memorandum of Understanding with the Alabama Cooperative Extension System. Please see Appendix B and I.
- j. Initiatives were implemented in order to have a positive effect on the amount of pesticides and fertilizers being applied. EPA launched the new Bee Advisory Box located on pesticide labels in an effort to protect pollinators. Stormwater Program staff promoted this new addition to pesticide labels at various venues. Workshops and presentations about the proper use of and alternatives to chemicals were held locally and articles were published in local newspapers. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix B.
- k. The Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

6. Illicit Discharges and Improper Disposal

- a. The County's Environmental Services Department has established a program to address sanitary sewer overflows. Once the department is aware of a sanitary sewer overflow, the 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. Please see Appendix D.
- b. The County's Environmental Services Department (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 sewer overflows. This is a free service to all of the citizens of Jefferson County. Collection bins are located at

several sites around the county with plastic containers for residents to take home. Once a container is filled, it can be returned to the collection bin and exchanged for a clean container. The containers are collected weekly by the Grease Control Program inspectors and the oil is picked up at the Shades Valley Wastewater Treatment Plant by local rendering companies. Grease and oil accumulate in the sewer system and require diligent maintenance to prevent sanitary sewer overflows. ESD developed this program in the ongoing effort to prevent overflows and protect the water resources. The bins were constructed by the County's General Services shop and are 4' wide by 4' tall and 2' deep and sit on legs 6" off the ground. The bins sit in a hard, durable plastic tray which provides a liquid retention barrier should a container leak or spill. There are currently **19 drop-off points** that accept filled containers for recycling, which is an increase of two new sites from last year. A total of **2,046 gallons** was collected between October 1, 2012, and September 30, 2013.

The County's Environmental Services Department (ESD) distributed over **6,000 flyers** within apartment complexes, made **12 presentations**, held **one news conference**, provided **bilingual program materials** that were both displayed throughout the complexes and distributed to residents in **20 zip codes**. In addition, a form letter which can be sent to the residents as a reminder of the cooking Oil and Grease Recycling Program was made available to the apartment complex management.

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

- c. The Birmingham Water Works, provider of drinking water for most of Jefferson County, published and distributed bill inserts to residential customers and have developed information posted on their web site. The materials discuss the impact that pet waste, lawn chemicals, vehicle fluids, septic systems and hazardous household materials can have on water quality, as well as the need to reduce runoff by watering appropriately. Approximately **600,000 residential customers** are served by the Birmingham Water Works. Please see Appendix D.
- d. To promote proper disposal of various household items, the Jefferson County Commission partnered with Alabama Environmental Council (AEC) on its recycling program, Recycle Alabama. The Stormwater Program staff promotes Recycle Alabama through its Jefferson County Clean Water Awareness Campaign posters, newsletters, presentations and events. The AEC runs a nonprofit recycling center in downtown Birmingham which accepts textiles, glass, metal, cardboard, paper and other items. AEC created and promotes Recycle Alabama through its website (www.recycleAL.com) and printed materials. Under the Recycle Alabama campaign, AEC in partnership with Jefferson County Department of Health, the University of Alabama at Birmingham, Jefferson County Commission and several municipalities organized the purchase and distribution of recycling drop-off trailers. **Ten trailers** were 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. During this reporting period, the AEC collected over **1,371 tons** of

- glass, paper and cardboard, plastic and metals. Jefferson County Commission has a formal partnership through an ongoing Memorandum of Understanding with the Alabama Environmental Council and its recycling campaign known as Recycle Alabama in an effort to reduce expenses by sharing knowledge and resources, minimizing duplication of effort, and enhancing the efficiency of stormwater pollution prevention outreach efforts. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix D and I.
- e. The Stormwater Program staff promoted and publicized **five e-waste events** aimed at collecting and properly disposing of electronic waste in the Birmingham Metropolitan Area. These events were held on October 24, 2012, March 30, 2012, April 13, 2013, May 9, 2012, and June 23, 2012. These large-scale events were initiated by the City of Birmingham, the Green Resource Center of Alabama in conjunction with partnerships among local government, non-profits, and businesses and the Alabama Environmental Council. The Alabama Environmental Council accepts electronics at its downtown recycling center and Technical Knockout at their facility in Homewood. Collection totals are included in the Summary Table. Please see Appendix D.
 - f. Stormwater Program staff promoted the 6th National Prescription Drug Take-Back Event (April 27, 2013) held in the Jefferson County area. 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 **371 tons** of medication were collected according to the Drug Enforcement Administration. Materials to promote this program were available in both English and Spanish and in various formats (posters, handouts, etc.). The Drug Enforcement Administration (DEA) published its Notice of Proposed Rulemaking for the Disposal of Controlled Substances in the Federal Register Dec 21, 2012. The proposed regulations seek to implement the Secure and Responsible Drug Disposal Act of 2010. Please see Appendix D.
 - g. As an ongoing effort to promote the proper disposal of cigarette butts, the Stormwater Program in partnership with Keep Birmingham Beautiful Commission (KBBC) and City Action Partnership (CAP) created a sticker which was placed on **59 cigarette receptacles**. Please see Appendix D.
 - h. The Stormwater Program has a dedicated Hotline number and email address for the public to report suspected water pollution. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).
 - i. The Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

7. Spill Prevention and Response

For Permit Year 2012-2013, Jefferson County Emergency Management Agency (EMA) had the responsibility for spill prevention and response, and responded to **88 events**. EMA distributes an informational *Kids Wheel on ... Common Household Products* that lists the proper care, usage and disposal of many common household chemical products that include: paint, arts and craft products, pest products, cleaners, and batteries. These wheels are distributed at various public education events throughout the year including

EMA's Be Ready Day which is held annually in the fall. The spill prevention and response effort is coordinated and implemented in conjunction with fire departments located within Jefferson County. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10) and see Appendix D.

8. Industrial and High Risk Runoff

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

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

A Grease Control Ordinance, adopted in 2006, requires every food service facility to obtain a Food Service Facility Grease Control Program Permit. Permits, which are not transferable, are written authorization to discharge to the County's wastewater collection system and are assigned to the owner of the food service facility. All facilities are subject to inspection and monitoring. Other Permit conditions include annual renewals, maintenance and compliance, retention of records, implementation of best management practices, training for employees, and proper disposal. Training DVDs and 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 can be obtained from the County's Environmental Services Department or downloaded from Jefferson County's website (<http://www.jeffcoes.org/Default.asp?ID=34&pg=Food+Service>) including how to apply for a permit. Some of the materials are available in Spanish.

During this reporting period, **1,942** food service facilities were **permitted**, and **1,942 annual site inspections** to food service facilities were made. A total of **228** 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 one employee, and **270** food service facilities **trained their staff**. Please see Appendix D and E.

- 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. Under Section 2-27-5.1 of the Alabama Code, local governments are prohibited from passing ordinances regulating pesticides. To comply with the County's MS4 NPDES Permit and Alabama Law, the Jefferson County Commission formalized an ongoing partnership with agencies through a Memorandum of Understanding to comply with this Permit requirement. Please see Appendix B, Appendix E and Appendix I.
- There were **three Alabama Certified Landscape Professional Programs (ALCLP)** held during this Permit year: February 2013, June 2013, and August/September 2013. The ALCLP's teaching and certifying partners include the Alabama Cooperative Extension System, the Alabama Nursery and Landscape Association and the Alabama Green Industry Training Center. This program was established to offer a comprehensive teaching, testing and continuing education program to develop and recognize excellence among the landscape professionals of Alabama.

ALCLP applicants are required to know over 250 plant materials, including weeds, annuals, perennials, trees and shrubs along with a defined list of plant pests and landscape problems. Other areas of expertise include landscape plan take-off knowledge, construction materials and standards, grading, landscape equipment safety, operation and maintenance, irrigation basics and trouble shooting, pruning, sod selection and installation, grounds maintenance BMPs, pesticide application and safety requirements, Alabama state landscape regulatory requirements, soil and fertility management and other areas necessary to be recognized as an ALCLP.

Even though ALCLP Certifications are voluntary, at the conclusion of the four session classes, students are required to pass a 100 question written exam and a 50 question plant and pest identification quiz to obtain the ALCLP designation. Jefferson County Commission formalized an ongoing partnership with these agencies through a Memorandum of Understanding. Please see Appendix B, Appendix E and Appendix I.

- b. The Fleet Management Division (FMD) of the County's Roads and Transportation Department implements a recycling program. For the Permit Year 2012-2013, the FMD properly disposed of **693 batteries** and recycled **8,472 gallons** of oil. Please see Appendix E.
- c. Jefferson County owns three landfills that are operated by Santek Waste Services. During the 2012-2013 Permit Year, the Turkey Creek Landfill (ALG160139) closed the active cell and the facility operates as a drop-off location, similar to the Johns Transfer Station. To date, there is only **one active** landfill site within unincorporated Jefferson County. Stormwater program staff conducted inspections of the facilities to identify and control pollutants from industrial and high risk runoff sites. The sites

were in compliance at the time of inspection, and the completed inspection forms are included in Appendix E.

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

9. Construction Site Runoff

- a. Jefferson County's Subdivision and Construction Regulations, Article 13 Erosion and Sedimentation Ordinance requires all land disturbing activities to obtain permits or an exclusion as part of the zoning process. The County's Storm Water Management Department reviews plans and issues Land Disturbing Activity Permits (or exclusions) for both commercial and residential sites. The County's Inspection Services Department is in charge of building permits and has been assigned to inspect the Land Disturbing Activity Permitted sites for compliance. Once the Department staff determines the site to be stable, as specified in the plans, a Certificate of Occupancy is issued and the permit is closed. During this reporting period, established SOPs were followed for the permitting, reviewing and inspection components of the Ordinance. Please see Appendix F.
- b. Staff distributed materials to inform applicants of the process and requirements of Jefferson County's Subdivision and Construction Regulations, Article 13 Erosion and Sedimentation Ordinance, Land Disturbing Activity Permit. Please see Appendix F.
- c. During the Permit Year 2012-2013, the County's Inspection Services and Storm Water Management Departments issued Land Disturbance Activity Permits for **252 residential single family homes** as part of its zoning approval process. These Departments also issued **136 exclusions for single family homes** which were exempt from Land Disturbance Permit requirements. In addition, a total of **23 commercial Land Disturbance Permits** and **13 commercial exclusions** were issued. Please see Appendix F.
- d. The County's Inspection Services Department reports **806 construction inspection activities** for the above permitted sites during the Permit Year 2012-2013. Complaints associated with permitted sites are handled through site inspections and will be reflected in the stormwater inspections numbers. Please see Appendix F.
- e. The County's Land Planning and Development Services Department received **452 complaints** related to weed and litter, flood plain, and zoning violations. A total of **590 notices of violation** cases have been corrected and resolved. Please see Appendix F.
- f. The County's Inspection Services Department (ISD) had **four inspectors, supervisors and staff**, complete the Qualified Credentialed Inspector (QCI) training for erosion and sedimentation control offered by the Home Builders Association of Alabama (HBAA). The course is a collaborative effort between the HBAA and ADEM and is offered several times throughout the year. ISD staff attended the QCI training on November 14, 2012, which included tools and strategies to help achieve and maintain compliance with the Storm Water Permit on all construction sites, including linear and roadway construction. Please see Appendix F.

- g. The County's Roads and Transportation Department has **17 inspectors, supervisors and staff** that carry a current Qualified Credentialed Inspector certification. Please see Appendix F.
- h. The County's Storm Water Management Department assumes responsibility for hosting and coordinating an Erosion and Sedimentation Control (ESC) workshop on an alternating basis with the Jefferson County Department of Health, the City of Birmingham, and the City of Bessemer. The County's Storm Water Management Department staff entered into a preliminary partnership with the Homebuilders Association of Alabama (HBAA) to provide its ESC workshops and maintain a database of attendees. The HBAA provided the April 24, 2013 ESC workshop for the County's Storm Water Management Department. A total of **64 people** attended the ESC Workshop. The purpose of this workshop was to provide appropriate education and training measures for construction site operators and municipal staff as required in ALS000001 and to reduce the impact of erosion and sedimentation in waterways. Educational materials were distributed at the workshops. Completion of the workshop allows an individual building a single family home to use this certification in lieu of posting the \$3,000.00 per acre surety required to ensure site stabilization. The *Field Guide for Erosion and Sediment Control on Construction Sites in Alabama* are distributed to attendees of the ESC Workshops for single family homebuilders. A total of 20 *Field Guides* ordered are in Spanish which will be distributed to Spanish speaking attendees as needed. Please see Appendix F.
- i. Stormwater Program staff was a member of the Erosion and Sediment Control Steering Committee during this reporting period and assisted with the 2012 Clear Water Alabama Seminar and Fields Days held on September 26-27, 2012 and Spanish Fort October 10-11, 2012. The Clear Water Alabama Seminar and Field Days are offered by the Alabama Erosion and Sediment Control Partnership to help planners, designers, contractors, inspectors, and others learn more about erosion and sediment control practices, new technologies, examples of stormwater and sediment control practices and products. Please see Appendix F.
- j. The County's Roads and Transportation Department currently implements **nine NPDES Permits** issued by ADEM to the County. The following are locations of the sites along with each Permit number: Bessemer Storage Facility (ALR107440), Bridge Replacement on Alliance Road (ALR107441), Brooklane Drive (ALR107579), Camp Ketona (ALR164097), Dickey Springs Road (ALR10A410), Linndale Road Spoils Area (ALR108214), Lowetown Borrow Pit (ALR16ECVR), Patton Chapel Road (ALR109069), and Camp Bessemer UIC (ALSI9937486). Please see Appendix F.
- k. The Stormwater Program staff created materials and posters within the Jefferson County Clean Water Awareness Campaign to educate the public regarding this Permit requirement. Please refer to Major Accomplishments, Education and Public Outreach (II.C.10).

10. Education and Public Outreach

Education and public outreach is a Permit requirement and also is used as a delivery tool that aids in implementing the other Permit requirements. A summary graph has been created to identify every Permit requirement that the following education initiatives,

listed alphabetically, addressed. This summary graph is included in the Education and Public Outreach Appendix G.

a. **24th Annual Nonpoint Source Conference**

Stormwater Program staff members attended the 24th Annual Nonpoint Source Conference offered by ADEM on January 17, 2013, in Montgomery, Alabama, in order to learn the latest information about the State's MS4 NPDES Storm Water Program. Please see Appendix G.

b. **Alabama Water Watch Chemical Workshops**

Stormwater Program staff attended a Trainer Refresher Course on September 14, 2013. In partnership with Turkey Creek Nature Preserve and the Botanical Gardens, this staff member assisted in conducting Alabama Water Watch trainings to **180 middle school students** at the Turkey Creek Nature Preserve on October 23 and October 24, 2012. These community volunteers become stewards of the watershed and act as liaisons who will teach their friends, neighbors and community leaders the importance of reducing stormwater pollution. This program trains volunteers to use standardized equipment and techniques to gather credible water information using quality assurance protocols and to use that data for environmental education, waterbody restoration and protection and watershed stewardship. Volunteers may also identify problems by analyzing data and taking action steps to resolve water quality problems. Please see Appendix G.

c. **Birmingham-Jefferson Food Policy Council**

A Stormwater Program staff member serves on the Birmingham-Jefferson Food Policy Council and Food Summit Committee and coordinated the speakers and content for the Agricultural Track, *How Does Your Garden Grow*, for the 2013 Food Summit held on September 27, 2013. The Agriculture Track contained information on proper planning and planting techniques, common pest problems and cures, and how to include composting and rain water harvesting into gardening plans. The Council reported **200 people** attended the Food Summit. Please see Appendix G.

d. **Brochures and Flyers**

The Stormwater Program staff distributed various brochures and flyers to inform and educate the public about stormwater runoff, and to provide helpful tips and resources to improve water quality. These brochures and flyers are displayed at the County's Land Planning and Development Services and Storm Water Management Department's front counters in brochure holders attached to the Clean Water Awareness poster stands, and also in the Master Gardener area of the Birmingham Botanical Gardens.

The brochures are: **Identifying and Reporting Water Pollution** (illicit connection, illicit discharges, illegal dumping, public reporting); **Lawn & Garden Products, Yard Waste** (fertilizer, pesticide, herbicide, illegal dumping); **Preventing Stormwater Polluted Runoff** (used oil, fertilizer, pesticide, herbicide, illegal dumping, household hazardous waste, public reporting); **Vehicle & Equipment Care & Maintenance** (motor oil); **Erosion and Sedimentation Control Permitting Process** (Jefferson County ESC requirements, public reporting); **Trees for Bees** (bee friendly yard care practices); **Erosion and Sedimentation Control Best Management Practices** (outlines BMP requirement for Article 13); **Let's Look at**

Sediment (issues resulting from erosion and sedimentation and offers preventative measures); **Rain Rain Come Our Way** (rain barrel project) and **Recycle Alabama's Recycling 101, Downtown Recycling Center, Recycling Drop-Off Trailer, Event Recycling Trailer, Business Recycling Program, and Glass Recycling Program**. Four of the brochures (Vehicle & Equipment Care & Maintenance; Identifying and Reporting Water Pollution; Lawn & Garden Products, Yard Waste; and Preventing Stormwater Polluted Runoff) include the education website address and the hotline number for public reporting as well as a "what you can do" list of behaviors to reduce polluted runoff.

The flyers are: **Trash Blows!** (litter abatement), **1 Drop Does Matter!** (household oil and grease recycling), and **It's Your "Doody"** (dog waste).

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

e. **Clean Water Awareness Campaign**

Stormwater Program staff created the Clean Water Awareness Campaign to inform and educate the public as well as affect behavioral change in order to reduce polluted stormwater runoff caused by the impacts of vehicle fluids, yard chemicals, pet waste, and litter. The campaign was designed to transcend the County's limited funds, noncontiguous geography and diverse population.

The Stormwater Program staff identified the need to create a system that would improve its ability to deliver the Clean Water Awareness Campaign messages to the public. The staff developed a collaborative network of agencies and organizations whose missions intersect with stormwater pollution prevention in some manner. This collaborative network has resulted in a message delivery system which has expanded the reach of the Clean Water Awareness Campaign by opening access to new audiences, reducing message fragmentation, and enhancing credibility through message uniformity.

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

f. **Complaint Reporting**

A phone hotline and an email feature were 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, brochures and flyers) and at the Stormwater Program education pages which are located at the County's Land Planning and Development Services Department website.

The pollution reporting hotline contains a recorded message for those citizens calling after normal business hours. The message instructs the caller to leave enough detailed information so staff can investigate the complaint.

The website (<http://jeffconline.jccal.org/dept>) includes an email feature to report suspected water pollution. An email complaint reporting feature is also available at the enforcement page of the County's Land Planning and Development Services Department website. This website is promoted and publicized through printed brochures created by the Stormwater Program staff.

g. **Events**

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

- i. 40th Anniversary of Clean Water Act. On October 18, 2012, the Clean Water Awareness Campaign posters were on display at a celebratory event hosted by the Alabama Coastal Foundation and the Alabama Rivers Alliance. This event was held at the Birmingham Botanical Gardens and celebrated the 40th Anniversary of the Clean Water Act. The theme of this event was the power of water. An estimated **100 people** attended this event.
- ii. Cahaba River Fry-Down. On October 7, 2012, the Clean Water Awareness Campaign posters were displayed and soil test kits and cooking oil and grease recycling containers were distributed at an event that benefitted restoring and protecting a local watershed. An estimated **600 people** attended this event.
- iii. Community Awareness Day. On October 4, 2012, the Clean Water Awareness Campaign posters were displayed and the cooking oil and grease recycling containers were distributed at a booth that was open to the public. Over **296 students** from five area schools attended this event as a field day trip.
- iv. Community Garden Gathering. On September 7, 2013, the Clean Water Awareness Campaign posters were displayed and brochures that pertain to the benefits of mulch, composting and pesticides were available for attendees. Over **70 people** attended this event hosted by the Community Garden Coalition and the Birmingham Botanical Gardens.
- v. Do Dah Day. On May 18, 2013, the Clean Water Awareness Campaign posters were displayed on over **50 pet watering stations** and at a booth. A flyer called *It's Your "Doody"* was created and distributed along with free pet waste bags to attendees. The purpose of Stormwater Program staff participation in this event was to bring about awareness of the impacts of pet waste on local water quality and the benefits of pet friendly landscaping to reduce PHF as well as erosion and sedimentation. In addition a fun and interactive poo toss game was offered to teach people the proper behavior for pet waste disposal. Approximately **300 pet waste bags** and flyers were distributed. The Do Dah Day Board estimated **20,000 people** attended this event.
- vi. Friends of Birmingham Botanical Gardens Plant Sales. The Friends of Birmingham Botanical Gardens held its Fall Plant Sale on October 20-21, 2012, and its Spring Plant Sale on April 5-7, 2013. The Clean Water Awareness Campaign posters were displayed at various locations throughout the venue.
- vii. Interfaith Environmental Initiative of Alabama (IEIA) Forum 2012. The Clean Water Awareness Campaign Posters were on display at a booth during the IEIA's *Conservation and Efficiency – What Works* forum held at the Birmingham Botanical Gardens.
- viii. National Neighborhood Night Out. On August 6, 2013, the Clean Water Awareness Campaign posters were displayed at a booth. It was reported that over **700 people** attended this free event in Center Point. Cooking oil and grease

recycling containers were distributed as well as other stormwater educational materials.

- ix. North Smithfield Green Leaf Heights Community Awareness Day. On August 24, 2013 the Clean Water Awareness Campaign posters were displayed and the cooking oil and grease recycling containers were distributed at a neighborhood event. Over **150 people** attended from the surrounding neighborhood.
- x. *The Dust Bowl* Promotion Preview Screening. On November 8, 2012, the Clean Water Awareness Campaign posters were on display and various brochures that pertain to soil and erosion prevention were available to attendees at a booth during a preview screening of Ken Burns' newest documentary, *The Dust Bowl*. It was reported that over **50 people** attended the event held at Birmingham Southern College. During this event, presentations were made by the Alabama Association of Conservation Districts and John McMillan, the Alabama Agriculture Commissioner prior to the preview of the documentary.
- xi. Urban Forestry Fair. Stormwater Program staff provided an educational game for **434 5th grade students** from various schools within Jefferson County at the annual Urban Forestry Fair held on February 13, 2013. The interactive and engaging game is designed to reinforce the idea of conserving natural resources and improving water quality.

h. **Friends of Birmingham Botanical Gardens**

A Stormwater Program staff member serves on the education committee of the Friends of Birmingham Botanical Gardens (FBBG). This committee directs all educational programs, including those related to water quality. FBBG coordinated and administered various children's programs and adult classes during its past fiscal year ending in June 2013. FBBG reports **15,390 children and 9,685 adults for a total of 25,075 individuals** attended its education programs. The FBBG promotes knowledge and appreciation of plants and the environment with educational offerings to over 350,000 visitors annually. The FBBG Strategic Plan emphasizes and implements practices that reduce stormwater runoff. The Jefferson County Commission formalized an ongoing Memorandum of Understanding which enhances the efforts of the Storm Water Management Department and FBBC. Please see Appendix G and Appendix I.

i. **Green Resource Center for Alabama (GRCA)**

A Stormwater Program staff member serves as Secretary on the Board of Directors and Chair of the Education Committee. In this capacity, the staff member created a Brown Bag Lunch and Learn series called Building Green Jobs in Alabama and Sustainable Living 101 that consisted of **11 free sessions** open to all residents of Jefferson County. Each session was structured in a seminar format that taught homeowners how to live, work and play with sustainability in mind. Staff also assisted with the annual Clover Crawl, a free home and garden expo held outside Vulcan Park and Museum. This annual event is designed to educate the public on the latest trends in green products and services that can be used throughout the home, garden or office. A total of **1,200 pounds** of electronics were recycled at this event. During this Permit period, the GRCA released the **fifth annual Green Progress Report** aimed at tracking and highlighting some of the most important and positive

environmental developments that occurred in the past 12 months. Please see Appendix G.

j. **Health Action Partnership Environmental Quality Committee**

In an effort to coordinate environmental initiatives, a Stormwater Program staff member serves on this Committee. Please see Appendix G.

k. **Jefferson County Water Festival**

Stormwater Program staff planned and implemented the Tenth Annual Jefferson County Water Festival held on October 9, 2012, at Samford University. The Water Festivals educated **804 fourth grade students**, teachers and parents from around Jefferson County. The purpose of the Water Festival is to educate students about where drinking water comes from and how to protect and keep it clean for themselves and future generations. Students participate in three hands-on activities and experiments. All the hands-on activities directly correlate with the Alabama Course of Study Science and SAT Objectives for fourth grade. Please see Appendix G.

l. **Media**

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

- i. An email database of local print and electronic media contacts was developed and utilized to assist Stormwater Program staff in informing Jefferson County residents about Clean Water Awareness Campaign information as well as announcements regarding workshops, activities, and events.
- ii. An article with stormwater pollution prevention information and links to resources aimed at reducing stormwater pollution is written and posted monthly at the Turkey Creek Nature Preserve (TCNP) blog site launched in March 2013. The articles are targeted to County residents and encourage stormwater friendly behaviors. The interactive nature of the blog site provides metrics for views and allows for staff to respond to reader comments and questions. According to WordPress, this blog was **viewed 302 times** during this reporting period. In addition, the blogs are posted at the TCNP Facebook page which currently has **3,616 “Likes”**.
- iii. Research has been conducted and preliminary plans have been made to implement a media presence (social, print and digital) to further the reach of the Stormwater Education Program. At present, Stormwater Program staff utilizes the social media capabilities of other local organizations and agencies with which a signed ongoing Memorandum of Understanding exists in order to assist with distributing Clean Water Awareness Campaign information and informing the public about upcoming workshops, activities, and events.

m. **Newsletters**

An e-newsletter, *JeffCo H2o News*, was launched to provide a cost effective way to support the posters and related components of the Clean Water Awareness Campaign. The e-newsletter content expands upon the poster topics and provides links to resources that can assist positive behavioral change. The e-newsletter is distributed on a quarterly basis to **2,100 Jefferson County employees, 123 local organizations**, businesses and individuals, and **40 print and electronic media**. Recipients are

encouraged to redistribute the e-newsletter to their own contacts. Copies of the e-newsletters are available at events and presentations during the year. A signup sheet is also available for the public to register for future mailings. A *Pollution Prevention Week Special Edition* was also created and distributed in September 2013. Please see Appendix G.

- n. **Pesticide, Herbicide Fertilizer/Landscape (articles, publications and workshops)**
During this reporting period, several workshops were held, various articles and newsletters written in order to provide information specific to homeowners regarding the proper use and application of yard chemicals and care of landscaping. These activities were implemented and promoted through the Jefferson County Clean Water Awareness Campaign and by various partnering organizations including Alabama Cooperative Extension System, Friends of Birmingham Botanical Gardens and Alabama Green Industry Training Center. Please refer to Major Accomplishments, Pesticides, Herbicides, Fertilizers (II.C.5) and see Appendix G and I.
- o. **Posters**
A series of posters was created to serve as the flagship component of the Clean Water Awareness Campaign. The posters deliver stormwater pollution prevention information in a highly visual manner in order to attract attention while overcoming language barriers, and utilize catchy headlines and taglines to further engage the public. The posters juxtapose potential stormwater pollution problems with practical solutions that focus on the benefits they bring to residents. A total of **29 posters** have been created and are on display at locations throughout Jefferson County, including the downtown Jefferson County Courthouse, the Birmingham Botanical Gardens lobby, in kiosks at the Turkey Creek Nature Preserve, at point-of-sale in ACE Hardware - Chalkville, and at various events throughout the year. Please see Appendix G.
 - i. ***1 Drop Matters!***
This oil and grease/vehicle fluid program contains **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:
$$\begin{array}{l} 1 \text{ drop of oil dripping per car} \times 740,000 \text{ cars in Jefferson County} = 740,000 \text{ drops of oil} \\ 740,000 \text{ drops} \div 11,520 \text{ drops per quart} = 64 \text{ quarts of oil} \\ 4 \text{ quarts are capable of polluting 1 million gallons} \end{array}$$

ACE Hardware has this poster on display in the area of the store where vehicle and equipment items are sold and the Birmingham Botanical Gardens has it displayed in its main lobby.
 - ii. ***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 on public lands. ACE Hardware has the posters on display in the area of the store where trash bags are

sold. Preliminary discussions were held with the Alabama Veterinary Medicine Association, Greater Birmingham Humane Society, and DooDah Day to establish partnerships that would assist the Stormwater Program with its pet waste management education efforts.

iii. ***From Roof to Stream***

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

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

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

v. ***It's '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, and nutrient delivery. The posters also focus on the ways in which utilizing mulch reduces storm water runoff, reduces the need for fertilizers and herbicides and helps replenish ground water.

vi. ***Reduce Runoff!***

This program contains **one poster** that focuses on stormwater polluted runoff. It informs people that water, either by rain or irrigation, carries lawn chemicals, pet waste and vehicle fluids directly to creeks. It reminds people to direct downspouts and sprinklers to water only vegetation and not impervious surfaces. ACE Hardware has this poster on display in the area of the store where sprinklers and irrigation system parts are sold and the Birmingham Botanical Gardens has it displayed in its main lobby.

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

This pesticide, herbicide, and fertilizer program contains **five 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 poster in this series pertained to bees and the impact pesticides have on the pollinators. This poster reminds

citizens that insecticides are not choosy; hence, they kill a wide range of insects, not just the pesky ones. ACE Hardware has these posters on display in the area of the store where lawn and garden chemicals and equipment are sold and the Birmingham Botanical Gardens has them displayed in its main lobby.

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

This floatable/litter abatement program contains **four posters** that focus on people transporting trash, debris and other waste to landfills. Intentional or not, items that blow out of vehicles becomes litter that pollutes waterways. Flyers, posters and demonstrations were used to help teach people to “tarp and tie” the load and to utilize a “brick and bucket” in the back of the pickup to hold trash. ACE Hardware in Chalkville has displayed the Trash Blows! posters and flyer in the store where tarps and tie-downs are sold.

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

p. **Presentations**

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

- i. Cahaba River Basin Clean Water Partnership Steering Committee. On April 12, 2013, Stormwater Program staff made a presentation on the impacts of litter and other improperly disposed of items on local water quality. An invitation was extended to all members to participate in a county wide cleanup event scheduled for April 27, 2013. On June 4, 2013, a presentation *Six Degrees of Collaboration, Tapping into the Power of Partnerships* given to the Committee by Stormwater Program staff.
- ii. Brown Bag Lunch and Learn. Free informational seminars hosted by the Green Resource Center for Alabama were held during this reporting period. Over **263 people** attended the series.

Building Green Jobs for Alabama. This seminar was presented in partnership with Ruffner Mountain and the USGBC 2012. **Twenty seven people** attended this event held on October 17, 2012 at Ruffner Mountain.

Sustainable Living 101. Ten free informational seminars were presented in partnership with Birmingham Botanical Gardens, Forestry Suppliers® and technu®. This series included many aspects on how to landscape and garden, travel, cook and live while being environmentally friendly. **Two-hundred thirty six people** attended this series. Instructors were chosen for each topic from varying organizations. Topics included: Learning the correct way and the right time of year to prune and fertilize your plants and trees (January 23), Identifying free disposal methods for many household items and discover how to reduce the

amount of daily waste you generate (February 13), How to create a safe space for your pets by learning the difference between pet friendly and unfriendly plants (March 27), See how you can bring innovative mobile technology to your front door with an emphasis on native plants (April 17), See how battery operated equipment has the power to get landscaping needs accomplished (May 22), Find out how to travel with sustainability in mind to some of Alabama's most beautiful destinations (June 26), Learn how container gardening and composting with worms are ideal for cramped locations (July 24), Find out how easy and nutritious it is going back to the basics to prepare a delicious meal for your family (August 21), and how to put down the chemicals and open your mind to a steamy method of ridding your landscape of some hard to manage plants (privet and kudzu) as well as undesired pests (September 25). Please refer to Major Accomplishments, Education and Public Outreach, Green Resource Center for Alabama.

- iii. Erosion and Sedimentation Control (ESC) Workshops. Stormwater Program staff made presentations at the ESC workshops to teach single family home builders, contractors, municipal employees and others involved in land disturbance activities about the requirements of the MS4 NPDES Permit, their responsibilities under Article 13 of the Jefferson County Subdivision and Construction Regulations and the proper usage of Best Management Practices (BMPs) on construction sites within Jefferson County. Please refer to Major Accomplishments, Construction (II.C.9).
 - iv. Stormwater program staff gave **13 presentations** to local organizations and neighborhood associations in an effort to obtain community participation in the People Against a Littered State Spring 2013 Cleanup and involvement for future prevention programs. The presentations included information about the effects of many pollutants such as: litter and debris, pet waste, lawn and garden chemicals, bare soil, vehicle fluids and cooking oil and grease to our local waterways. The meetings were held on January 12, February 12, February 18, February 28, March 13, March 18, March 26, March 28, April 2, April 3, April 8, April 15, and April 25, 2013. Please refer to Major Accomplishments, Roadways (II.C.3) and see Appendix G.
 - v. UAB Community OutReach Development (CORD) Summer Program. Stormwater Program staff provided **three educational presentations** (June 13, June 21, and July 18) for the CORD Summer Camp, a partnership between the University of Alabama at Birmingham and the Turkey Creek Nature Preserve. A total of **61 students** attended the CORD Summer Camps.
- q. **Rain Barrel Workshop**

The Stormwater Program promotes the use of rain harvesting systems as a way to help collect, contain and reuse rain water in an effort to reduce the cumulative effect of stormwater runoff as well as the volume and velocity of water in the MS4.

The Alabama Cooperative Extension System, in partnership with many local, state and regional agencies, conducted several workshops that taught how homeowners can reduce stormwater runoff. The workshops demonstrated how to build and install rain barrels as well as how to create rain gardens to enhance landscape, filter, and capture excess amounts of rain water. Stormwater Program staff gave a presentation *Beyond*

Rain Barrels... Harvesting Stormwater to **23 people** at the workshop held on May 11, 2013. The presentation discussed the positive impact that homeowners have on local water quality by using rain barrels. The Jefferson County Commission formalized this partnership with an ongoing Memorandum of Understanding to enhance the efforts of both agencies. Please see Appendix G and Appendix I.

As part of their weekend programming, the Friends of Birmingham Botanical Gardens held a free educational demonstration on the benefits of a rain barrel. It was reported that **20 people** attended the program.

Alabama Environmental Council (AEC) also held various rain barrel workshops (October 8, March 17, April 6, and July 7). The Jefferson County Commission formalized an ongoing Memorandum of Understanding which enhances the efforts of the Storm Water Management Department and AEC. Please see Appendix G and Appendix I.

r. **Southeast Stormwater Association (SESWA)**

Stormwater Program staff attended the Annual Conference held on October 18-19, 2012 and the Spring Seminar held on April 18-19, 2013. Staff contributed information in **four SESWA ForeCast newsletters** that were distributed to NPDES permittees, consultants and private agencies throughout Environmental Protection Agencies (EPA) Region 4 network. Stormwater Program staff participated in SESWA webinars held on January 23 and March 28, 2013 and an EPA webcast held on February 12, 2013.

s. **Surveys**

In response to a 2009 Environmental Protection Agency audit, a survey was created and implemented by the Stormwater Program staff as a way to measure Jefferson County residents' awareness level and identify their behaviors as they pertain to stormwater and stormwater related issues. University of Alabama at Birmingham's Communication Studies Department assisted the staff in reviewing the survey content for bias, determining the confidence level of the surveys collected, and analyzing and interpreting the data. Jefferson County's Revenue Department assisted with distributing and collecting the surveys to local citizens who were waiting in line for car tags and drivers licenses. The purpose of this survey was to establish a baseline level of knowledge, understanding and behaviors. During this reporting period a total of **518 surveys** were completed and analyzed. The survey results are being used to assist the Stormwater Program staff to refine campaign messages, identify and remove obstacles to behavior change, and more efficiently direct resources. Please see Appendix G.

t. **Sustainable Smart Cities Symposium**

Stormwater Program staff attended this symposium held on April 3, 2013 in Birmingham, Alabama to learn about the environmental impact arising from intense urbanization and find solutions to address these challenges.

u. **Trees for Bees**

Stormwater Program staff serve on the Trees for Bees committee whose goals are to conserve and increase the numbers of honey bees in Alabama. The objectives of this committee are to reduce the impact of pesticides and insecticides used on honey bees; improve environmental conditions for honey bees; promote planting of bee friendly

plants; and to reduce people's fear of bees. Through various educational outreach methods, homeowners are taught the prudent use of lawn and garden chemicals, with emphasis on pesticides and insecticides.

During this Permit year the committee's efforts focused on securing a domain name and a host for the web site. Plant tags were distributed to local garden centers so that homeowners can easily spot bee friendly plants. Car decals were distributed to the public as a way to brand this program.

Several bee workshops/seminars were held by the Trees for Bees Partners and the Clean Water Awareness Campaign *Bee Responsible* Poster was on display during these events. Please see Appendix G.

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

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

w. **Website**

Stormwater educational information is available at the Jefferson County website: <http://jeffconline.jccal.org/depts>. The website offers the public another opportunity to receive information about stormwater runoff, to learn helpful tips to improve water quality, to learn how to report water pollution, to find links to other resources and to access materials that can be downloaded for reference and further information. The website also includes an email feature to report water pollution. The website is promoted and publicized through various printed materials. During this reporting period, Stormwater Program staff began to work on developing the newly created Storm Water Management Departments' website. Previously our information had been housed within another Department. Please see Appendix G.

11. Monitoring Programs

Jefferson County began its own Stormwater Management Program at the beginning of Permit Year 2009-2010. Initially, staff reviewed the unincorporated area of Jefferson County in order to set up the monitoring plan. The staff established six instream monitoring locations to be sampled each season during wet and dry weather periods. A total of 48 sites, classified as screening points, were located near outfalls of tributaries into the major receiving waters. The Permit requires all outfalls to be screened during the permit cycle. As previously reported, 100% of the MS4 outfalls have been screened. Dry weather screening of the MS4 will resume when the new MS4 Permit is issued, should the same requirements be included therein. In March 2010, Jefferson County submitted a revised SWMP to ADEM that included an Interim Monitoring Plan. The revised monitoring plan has been accepted by ADEM with no further comments. Please see Appendix A.

During Permit Year 2012-2013, Stormwater Program staff collected instream and investigation samples during wet and dry weather. This information is summarized and

quantified in the Summary Tables. Please see Appendix H.

D. PROGRAM STRENGTH AND WEAKNESSES

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

- The loss of the Occupational Tax, a major revenue source that accounted for approximately 48% of general fund unrestricted revenues, caused the Jefferson County Commission to eliminate approximately one-third of its staff positions, curtail many programs and services, and close some facilities. These actions have resulted in major reductions in many of the programs that have been previously reported in the County's Stormwater Program. Jefferson County filed a petition for relief under Chapter 9 of the bankruptcy code on November 9, 2011. Please see Appendix I.
- A limitation of the Jefferson County Stormwater Program is its current water quality monitoring data. Establishment of trends in stormwater pollutant concentrations depends on a vast amount of water quality data. The County currently does not have adequate data to support a determination of improvement or degradation in water quality overall. Furthermore, the climate during the year was not conducive for collecting samples, much like that of years past. Jefferson County and a majority of central Alabama also experienced massive flooding. One after another, meteorologists, statistics, and news reports documented weather extremes statewide. Moreover, the National Weather Service's office reported the summer months were the rainiest of 2013 (*The Birmingham News* July 2013). From severe drought to abnormally wet conditions, Jefferson County experienced record-making events during Permit Year 2012-2013 (see Appendix H). For the aforementioned reasons, Jefferson County was unable to collect samples for all wet instreams and screening points. Moreover, as outlined in the Major Accomplishments, Monitoring Programs (II.C.11) section, Appendix H includes supporting documentation of the adverse climatic conditions which prohibited the collection of samples.
- A second limitation of the Jefferson County Stormwater Program is the way in which the County is geographically situated and politically structured. The 50 receiving waters specified in the Permit flow in and out of both incorporated and unincorporated areas of the County. While the County has the authority over unincorporated areas of Jefferson County, this authority has been removed in incorporated areas and left to individual jurisdictions. There are no consistent programs, regulations or standards for monitoring that assist the County with its evaluation of water quality improvement. These constraints limit the ability of Jefferson County to both improve and evaluate water quality.
- A strength of the County's Stormwater Program has been its public education program. While the County's Stormwater Program is responsible for unincorporated areas of the County, its educational efforts often extend into incorporated areas of the County, thereby educating people who reside in adjoining areas. The launch of the Clean Water Awareness Campaign and its poster series has provided a method to disseminate information to the public as well as serve as a catalyst for partnering with other entities. Stormwater Program staff has focused on developing and formalizing alliances and partnerships with agencies, organizations and associations which have similar goals in order to expand its educational reach throughout Jefferson County. The staff also implemented a countywide survey to assess knowledge level and behaviors related to improving water quality. The results of the survey will help focus efforts and allocate resources to more efficiently and effectively deliver public education.

E. FUTURE DIRECTION

Jefferson County Storm Water Management Department (SWMD) will continue working on previously established programs for the Permit Year October 1, 2013, through September 30, 2014. Jefferson County is aware that ADEM is in the process of issuing new NPDES MS4 Phase I Permits. Until that time, Jefferson County will continue to work toward addressing current Program requirements.

III. Summary Table

<i>Element of Program</i>	<i>Requirement</i>	<i>Activities Required</i>	<i>Complied With</i>	<i>Activities Accomplished During Calendar Year</i>	<i>Comments</i>
Structural Controls	Operate the MS4 and structural controls to reduce pollutant discharge	Maintenance and inspection performed	●	6,641 cubic yards removed from ditches	See Appendix B
New Development and Significant Redevelopment	Comprehensive master planning process to minimize pollutant discharge	Minimize pollutants after construction is complete	●	Redevelopment plans for 2011 tornado-stricken communities continue	Concord, McDonald's Chapel, & North Smithfield
Roadways	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	Roads and Transportation Department removed 6,641 cubic yards from roadside ditches	See Appendix B
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	Over 30 tons of trash and debris removed from Valley Creek	Jefferson County WWTP crew aided 150 volunteers
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	Warrior River Bankhead Cleanup filled 2 dumpsters	75 volunteers participated
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	PALS' Spring Cleanup removed 1,062 bags of litter	241 volunteers participated
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	Over 2 tons of litter was removed at Turkey Creek	School and Service groups participated

Roadways	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	2.11 tons of trash and debris removed from Village Creek	96 volunteers participated
	Operate and maintain to minimize pollutants	Refuse, litter, and debris removal	●	Trash and Tires removed from Shades Creek	120 volunteers participated
	Operate and maintain to minimize pollutants	Street maintenance and litter control	●	Executed upon public complaint or as-needed basis	
	Operate and maintain to minimize pollutants	De-icing activities	●	Performed on as-needed basis	Jefferson County applied 210 tons of sand
Flood Control Projects	Assess impacts on water quality	Evaluate structures based on Jefferson County Floodplain Ordinance	●	All flood management projects were reviewed	0 Flood control permits were issued
Pesticide, Herbicide, and Fertilizer Application	Reduce pollutant discharge related to storage and application	Implement controls for discharge and storage	●	Chemicals are stored in secure, climate controlled warehouses	See Appendix B
	Reduce pollutant discharge related to storage and application	Implement controls for application	●	Chemicals minimally applied to right of way and County owned properties.	6 Licensed Applicators' Permit numbers in Appendix B
Illicit Discharges and Improper Disposal	Detect and eliminate discharges to the MS4	Dry Weather Investigative Monitoring	●	1 Investigation site sampled	See Appendix H
	Detect and eliminate discharges to the MS4	Identify and prevent pollution from entering the MS4	●	2 Investigations resolved	

Illicit Discharges and Improper Disposal	Detect and eliminate discharges to the MS4	Establish and publicize a hotline for public use	●	Hotline and email notifications were established	See Appendix G
Spill Prevention and Response	Prevent, contain, and respond to spills	Conduct spill response	●	EMA responded to 88 spills	See Appendix D
Industrial & High Risk Runoff	Identify and control pollutants in stormwater discharges	Inspection of industrial and high risk runoff sites	●	3 Landfill inspections conducted	See Appendix E for Inspection Forms
	Identify and control pollutants in stormwater discharges	Jefferson County Fleet Management operates in-house recycling program	●	693 batteries were recycled	See Appendix E for records
	Identify and control pollutants in stormwater discharges	Jefferson County Fleet Management operates in-house recycling program	●	8472 gallons of motor oil were recycled	See Appendix E for records
	Identify and control pollutants in stormwater discharges	Jefferson County Environmental Services operates oil and grease recycling program	●	2046 gallons of cooking oil and grease were collected	See Appendix D for records
Construction Site Runoff	Reduce pollutant discharge from construction sites	Staff training as Qualified Credentialed Inspector (QCI)	●	21 Jefferson County employees certified	See Appendix F
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	●	275 Land Disturbing Permits were issued;	23 Commercial permits issued; 252 Residential permits issued
	Reduce pollutant discharge from construction sites	Inspection of land disturbing activities and BMPs	●	149 Exclusions were issued	13 Commercial exclusions issued; 136 Residential exclusions issued

Construction Site Runoff Continued	Reduce pollutant discharge from construction sites	Erosion and Sedimentation Control workshop for developers, contractors, government officials	●	64 people attended	See Appendix F
	Reduce pollutant discharge from construction sites	Inspection of Jefferson County NPDES construction sites	●	9 NPDES permitted sites within calendar year	Bridge installation, spoils area, road work, borrow pit; See Appendix F
Public Education	Promote, publicize, and facilitate public reporting of illicit discharges to the MS4	Program includes hotline, websites, posters, brochures, presentations, water festivals, and event booths	●	Performed by Jefferson County staff	See Appendix G
	Promote, publicize, and facilitate public reporting of illicit discharges to the MS4	Complaint reporting application was utilized	●	452 Complaints received and investigated; 590 NOVs were issued	In areas of litter, zoning violations, and floodplain; See Appendix F
	Promote, publicize, and facilitate public reporting of illicit discharges to the MS4	Erosion and Sedimentation Control workshop for developers, contractors, government officials	●	64 people attended	See Appendix F
	Promote, publicize, and facilitate improper disposal of materials to the MS4	Eliminate the presence of illicit and improper discharges	●	Recycling center kept 1,371 tons of material out of area landfills	Items such as glass, paper, cardboard, aluminum, & plastic; See Appendix D

Public Education Continued	Promote, publicize, and facilitate management and disposal of oil and household hazardous wastes	Jefferson County Fleet Management operates in-house recycling program	●	693 batteries were recycled	See Appendix E
	Promote, publicize, and facilitate management and disposal of oil and household hazardous wastes	Recycling of household electronics containing hazardous materials	●	5 E-waste disposal events were held, collecting over 16 tons	Laptops, PCs, monitors, TVs, and cellphones were e-cycled
	Promote, publicize, and facilitate use, application, and disposal of pesticides, herbicides, and fertilizers	Implement controls for use, application, and disposal	●	Chemicals minimally applied to right of way and County owned properties.	6 Licensed Applicators; Permit numbers in Appendix B
Monitoring Program	Detect presence of illicit connections and improper discharges to the MS4	Dry Weather Screening	●	19 Instream sites sampled	See Appendix H
	Identify, investigate, and address areas contributing pollutants to the MS4	Wet Weather Screening	●	5 Instream sites sampled	See Appendix H
	Monitor pollutants in stormwater discharges to the MS4	Industrial and High Risk Runoff	●	Collected by industrial facilities	Facilities governed by NPDES Permits submit info to ADEM
	Dry weather screening	Screen MS4 outfalls	●	100% previously accomplished	

● =Yes

IV. Program Modifications

Jefferson County is not proposing any modifications to its current Stormwater Program.

V. Fiscal Analysis of Permittees' Program

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