

Stormwater Management Program Plan

Jefferson County, Alabama



**Department of Development Services
Room B-200
716 Richard Arrington, Jr. Boulevard North
Birmingham, Alabama 35203**

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Regulatory Background

Federal Regulations

The Clean Water Act (CWA) establishes environmental programs to address water pollution. This law establishes the National Pollutant Discharge Elimination System (NPDES) program to protect the nation's waters. The law also directs the U.S. Environmental Protection Agency (EPA) to issue rules on how to implement this law. Under the NPDES program, a municipal stormwater program was developed in two phases in an attempt to manage pollution from non-point sources. This program requires that the operator:

- Reduce the discharge of pollutants to the maximum extent practicable (MEP)
- Protect water quality
- Satisfy the appropriate water quality requirements through the NPDES Permit
- Manage stormwater quality activities through a Stormwater Management Plan (SWMP)

Phase I of the Environmental Protection Agency (EPA) municipal stormwater program was promulgated in 1990 under the authority of the CWA. Phase I relies on the NPDES permit coverage to address stormwater runoff from medium and large municipal separate storm sewer systems (MS4), serving populations of 100,000 or greater. The Alabama Department of Environmental Management (ADEM) is authorized to issue NPDES permits by the EPA.

State Regulations

In 1995, ADEM issued municipal NPDES permit ALS000001 to 23 co-permittees to designate the region as Phase I jurisdictions, which included unincorporated Jefferson County, AL. Jefferson County complied with the permit through a cooperative arrangement with the other co-permittees. The Permit renewed in 2001 and was extended under an administrative order.

On October 1, 2009, Jefferson County ended its association with the consortium and assumed its responsibilities for compliance with permit ALS000001 in the unincorporated area of Jefferson County.

On September 27, 2018, Jefferson County Commission was issued a new MS4 Individual Phase I Permit because the previous Permit expired in October 2006.

Permit Applicability and Coverage

MS4 Coverage and Eligibility

Permit ALS000001 applies to the unincorporated areas within the corporate boundaries of Jefferson County. The MS4 will focus the program on the urbanized areas of the County in accordance with ADEM's Response to Comments (RTC), which is based on EPA's intent from

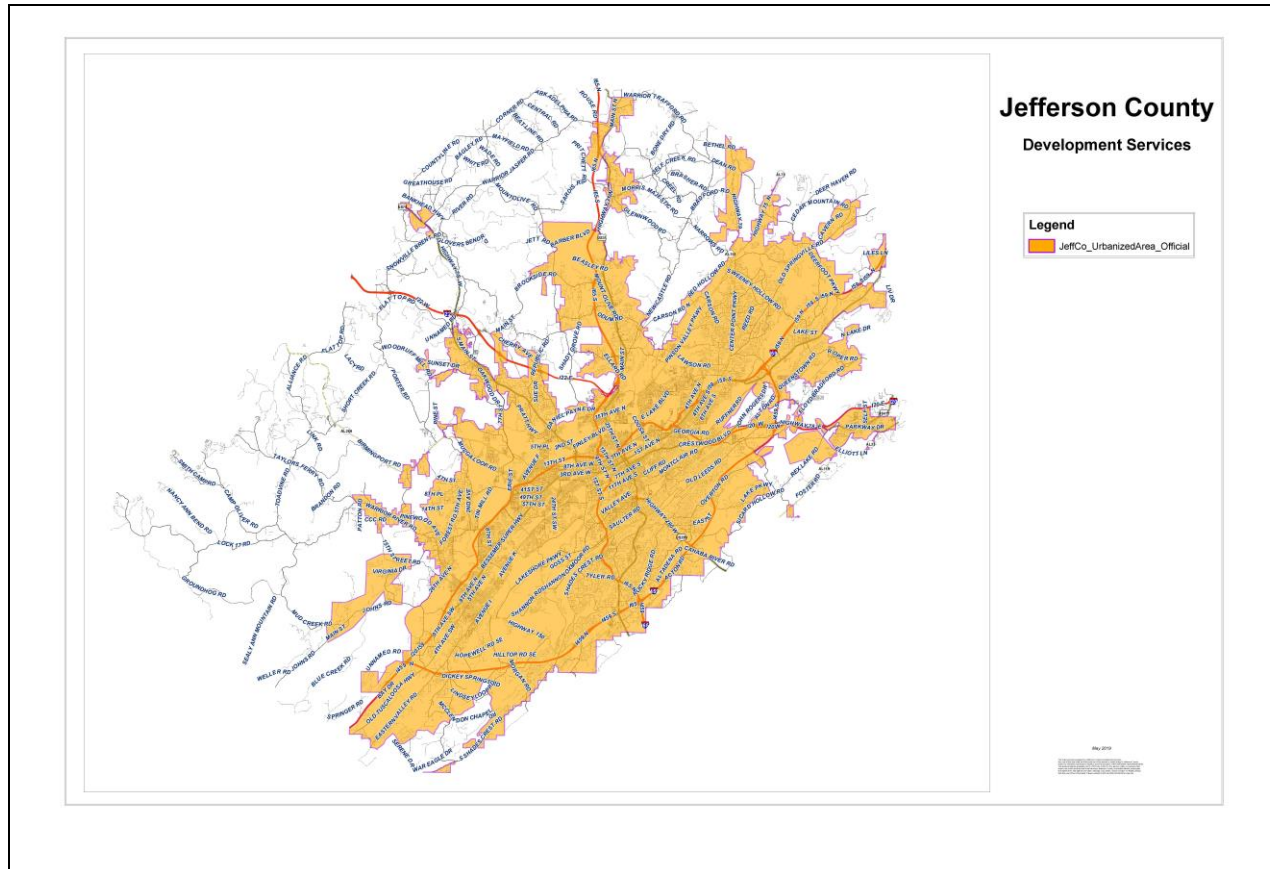


Figure 1. Map of the urbanized and developing areas in Jefferson County modified from the 2010 Census data.

the Federal Register Vol. 55, No. 222, Page 48041. Census data from 2010 was acquired to determine the urbanized areas. A map was created using the data and the area was expanded to include developing areas as well as currently proposed areas to develop. A map of Jefferson County that combines the urbanized and developing portions within the County is included in Figure 1.

Allowable Non-Stormwater Discharges

The following non-stormwater discharges may be discharged in Jefferson County and are not required to be addressed in the illicit discharge detection and elimination program or other minimum control measures unless they are determined by Jefferson County or ADEM to be a significant contributor of pollutants:

- a) Water line flushing
- b) Landscape irrigation (not consisting of treated, or untreated wastewater unless authorized by the ADEM)
- c) Discharges from potable water sources

- d) Diverted stream flows
- e) Rising ground waters and springs
- f) Uncontaminated ground water infiltration
- g) Uncontaminated pumped ground water
- h) Foundation and footing drains
- i) Air conditioning drains;
- j) Irrigation water (not consisting of treated, or untreated wastewater unless authorized by the Department)
- k) Rising ground water
- l) Springs
- m) Water from crawl space pumps
- n) Lawn watering runoff
- o) Individual residential vehicle washing, to include charitable carwashes
- p) Flows from wetlands and riparian habitat;
- q) Dechlorinated swimming pool discharges
- r) Residential street wash water
- s) Discharges or flows from firefighting activities (including fire hydrant flushing)

Stormwater Management Program (SWMP)

Description

The SWMP includes a stormwater management program plan (SWMPP) developed by Jefferson County that describes specific actions or best management practices (BMPs) used by the County to meet the requirements of each of the ten control measures listed in the Permit. The SWMP must be developed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) and to protect appropriate water quality requirements of the CWA.

Retention of Records

In accordance with NPDES permit ALS000001, Part V.C., the County will retain all records, a copy of the ADEM general permit, and records of data. This information will be retained at:

Department of Development Services
 716 Richard Arrington, Jr. Boulevard North
 Room B-200 Courthouse
 Birmingham, Alabama 35203

The County will make this information available to the public if a request is made in writing to the Director. The County may charge a direct expense for information requested. Most of the information on the program is available at the County's website (www.jccal.org). The SWMPP, as well as the current and previous year's Annual Reports will be included on the County's website.

Reporting

The County will track the BMP activities, results, and changes to the SWMP through an Annual Report that will be submitted to ADEM each year by January 31 for the reporting period of October 1 through September 30.

Background Information on Jefferson County

Jefferson County participated with other local jurisdictions in an Authority from 1997 to 2009 to fulfill its obligations under its NPDES Permit. The Jefferson County Commission voted to separate from the Authority January 2009, with an effective date of October 1, 2009. In August 2016, the Departments of Stormwater Management, Land Planning and Development Services, and Inspection Services merged into one department called Department of Development Services (DDS). The DDS, under its Director, was assigned the responsibility of developing and administering a stormwater management program for unincorporated Jefferson County to ensure compliance with the CWA and NPDES permit requirements. Employees of DDS will continue to implement Jefferson County's Stormwater Program and coordinate program information between the following Jefferson County entities: Roads & Transportation Department (R&T), Environmental Services Department (ESD), General Services Department (GSD), Fleet Management (FM), and the Emergency Management Agency (EMA).

It is the County Commission's intent to implement a SWMP with existing personnel and to fund the program through existing stormwater fees, including but not limited to the following:

- Review plans and issue permits in accordance with the existing County procedures
- Utilize existing County staff involved with implementing other environmental regulations and plans such as zoning, subdivision regulations, weed and litter, building codes, building permits, floodplain management responsibilities, and comprehensive planning. This combines the NPDES requirements with the present functions of the County departments through permitting, inspections, and enforcement personnel.

NPDES Permit Requirements and Implementation

1. Structural Controls: The Permittee owned/maintained structural controls shall be operated in a manner to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP).

Jefferson County's R&T will continue to clean, inspect and repair MS4 drainage structures within Jefferson County rights-of-way, as needed. The R&T will investigate citizen complaints regarding the storm sewers within the rights-of-way, and stabilize and re-vegetate eroded areas. The R&T maintains maps of the structural controls and inspects existing and newly constructed structural controls on an annual basis, at a minimum. Maps of the structural controls and the Inspection Checklist are included in [Appendix A](#). The standard operating procedures (SOPs) for inspections are maintained at the respective R&T Camps (Ketona and Bessemer). The inspections, and any subsequent maintenance activities, are tracked in the Cityworks Asset Management software program. The R&T will continue to provide the amount of floatables, litter, debris, and sediment, if applicable, to be included in the Annual Report to ADEM.

2. Public Education and Public Involvement on Stormwater Impacts: Develop and implement a public education and outreach program to inform the community about the impacts from stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff to the MEP.

Jefferson County's DDS staff continuously implements a public education and outreach program to inform the community about the impacts from stormwater discharges on waterbodies, and the steps the public can take to reduce pollutants in stormwater runoff to the MEP. Public input will be sought through surveys and discussions during community-based meetings and public events scheduled throughout the current SWMP year. The input gathered will be considered in the development, revision and implementation of the SWMPP. The SWMPP will be included on the DDS website.

The Public Education and Involvement Program intends to address the following targeted pollutant sources during the current SWMPP year:

- Litter, trash, floatables
- Household hazardous waste (paints, chemicals, cleaners, etc.)
- Pesticide, herbicide, fertilizer
- Erosion and sedimentation control
- Automotive fluids, oils, washing
- Household cooking oil
- Yard waste
- Prescription drug disposal
- Pet waste

- Sedimentation
- Vehicle fluids

The Public Education and Involvement Program primarily addresses the reduction of litter, floatables and debris through the Clean Water Awareness Campaign, volunteer roadside litter cleanups, and the Litter Quitters video competition. The focus of these efforts is to involve residents in the process of removing litter, floatables and debris from roadways and ditches; informing residents of the negative effects that the presence of these items have on their communities; instilling a sense of pride and ownership in the community; and empowering residents to advocate and model proper disposal behavior for their peers.

The Public Education and Involvement Program informs and involves residents in stormwater pollution reduction efforts, information and activities through the Clean Water Awareness Campaign. The DDS staff use the Clean Water Awareness Campaign to inform and educate the public and affect behavioral change to reduce polluted stormwater runoff caused by impacts of vehicle fluids, yard chemicals, pet waste, and litter. This Campaign consists of the following:

- A series of publicly displayed posters that address targeted pollutants
- Brochures with stormwater management practices
- Flyers promoting participation in events and distributed to the public
- A yearly stormwater calendar that uses local venues to illustrate stormwater management practices is created and distributed to the public
- A quarterly e-newsletter with information addressing target pollutants is created and distributed to the public
- The Brown Bag Lunch and Learn seminar series teaching stormwater friendly practices for residential properties is publically promoted
- Stormwater education festivals and outdoor classrooms are created and offered to school age children
- Staff participation in public events where stormwater education information and activities are offered to the public
- Clean Water Awareness Campaign materials and opportunities are made available to the public via the Jefferson County website and Facebook
- Events are created and publicized to address target pollutants including household hazardous waste collection days and rain barrel workshops

Items deliver stormwater pollution prevention information in a highly visual manner in order to attract attention while overcoming language barriers, utilizing catchy headlines and taglines to further engage the public. Posters are on display at the Jefferson County DDS office and as slides on monitors at the Jefferson County Revenue Department in the Downtown Courthouse. The monitors are seen by any resident of Jefferson County who comes in person to renew a vehicle or boat tag

The DDS staff periodically assesses the effectiveness of its Public Education and Involvement Program through public surveys and questionnaires. These surveys and questionnaires are administered during public events, seminars and workshops. Staff attends local events and community meetings, gives presentations, and displays information on tables or booths so the public can learn about upcoming program events and the education campaigns.

A seven video module training series is offered to County department staff with information on stormwater BMPs, good housekeeping and targeted pollutants for various activities performed. These modules include: Preventing Stormwater Pollution; What We Can Do?; Materials Storage and Spill cleanup; Parks and Grounds Maintenance; Fleet Maintenance; Streets and Drainage Maintenance; Land Disturbances; and Solid Waste Operations. A record of staff trainings will be kept in a database.

A brochure entitled *Good Housekeeping Practices for Businesses* was created and is being distributed to business owners applying for or renewing a business license at the Main Courthouse and the Hoover, Center Point, and Northern Satellite Courthouse locations. The brochure informs business owners how they are responsible for implementing Good Housekeeping Practices conducting business or performing a service to both prevent polluted stormwater runoff from entering the storm drainage system and provide key stormwater BMPs that can be implemented.

Currently, a committee is being assembled and will arrange a yearly workshop for engineers, County staff, landuse planners, contractors and developers to provide stormwater runoff reduction techniques and low impact development/green infrastructure practices.

3. Illicit Discharge Detection and Elimination (IDDE): Ongoing program to detect and eliminate illicit discharges in to the MS4.

The DDS maintains the locations of outfalls and waterways using ESRI's ArcMap software. See [Appendix B](#) for a map of the major outfalls and a list of the latitude and longitude associated with the major outfalls in unincorporated Jefferson County. Article 13 of Jefferson County's Subdivision and Construction Regulations prohibits non-stormwater discharges to the MS4 and includes escalating enforcement procedures, which is included in [Appendix C](#).

The DDS staff will carry out dry weather screening on outfalls 36" or larger pipes and box culverts at least once per the five-year period of the permit. Priority areas, defined as the outfalls located within the urbanized area of Jefferson County, will be screened on a more frequent basis to be determined by initial findings. The inspections will be conducted in dry weather that follows 72 hours after a previous rain event totaling 0.1 inches of rain. If a flow is observed, staff will measure field parameters such as pH, temperature and dissolved oxygen, if necessary. Staff observe visual indicators such as odor, color, clarity, floatables, biological, etc. and record the information on a Field Data Sheet. Based on the field observations, DDS staff may collect a water quality sample and submit it to an independent laboratory. Should the analyses suggest an illicit discharge, staff will begin an investigation as to the source. The investigation may entail

additional samples being collected, identifying NPDES or non-NPDES sites located upstream, and using Geographic Information System (GIS) mapping and the ADEM eFile database. These procedures are in accordance with EPA's guidance manual, *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development Technical Assessments*, Center for Watershed Protection, October, 2004. Eliminating an illicit discharge follows the Enforcement Authority steps of the *Enforcement and Abatement* section in Article 13. If the source of the illicit discharge is coming from an adjacent MS4, DDS staff will notify ADEM's Birmingham Field Office, log a complaint via the ADEM website, and contact a representative from the MS4 jurisdiction.

The DDS maintains and publicizes a hotline for the public to report illicit discharges. A seven video module training series is being offered to Jefferson County departments to provide their staff with information on stormwater BMPs, illicit discharges, good housekeeping and targeted pollutants for various activities.

The Jefferson County ESD continues to perform routine maintenance and inspections of its sanitary sewer lines to find infiltration and inflow to eliminate un-permitted discharges and broken or leaking lines. The ESD administers a county-wide household cooking oil and grease recycling program to reduce the amount of oil that enters the sanitary sewer system, to help reduce sewer overflows to the MS4.

4. Construction Site Stormwater Runoff Control: The Permittee shall further revise, implement and enforce an ongoing program to reduce, to the MEP, the pollutants in any stormwater runoff to the MS4 from qualifying construction sites.

The DDS requires construction sites obtain coverage under an Erosion & Sedimentation Control permit, regardless of size, under the authority of the Subdivision and Construction Regulations. Construction sites that qualify for an ADEM NPDES General Permit are required to provide proof an ADEM permit was acquired. Article 13 *Erosion and Sedimentation* of the Ordinance explicitly requires effective selections from the *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. See [Appendix C](#) for site plan approval procedures, the job site compliance inspection checklist, and Article 13 that includes Jefferson County's enforcement actions.

The County continues to maintain a hotline for citizens to report pollution discharges from construction sites. Inspectors in both DDS and R&T maintain QCI certifications to verify use and proper maintenance of appropriate BMPs. County inspectors verify BMPs before land disturbance occurs, during construction, and at final inspection. Failure of a builder or developer to properly maintain the BMPs during the construction process may result in the staff issuing a notice of violation (NOV). Failure of a builder or developer to respond promptly and properly to a NOV may result in an order to cease and desist construction activities and/or a fine. Inspectors are in regular contact with permit applicants regarding the BMPs throughout the duration of the

project. Enforcement response plans are maintained in the Accela software system. The inspection frequency will follow the requirements in ALS000001.

The DDS provides an annual educational program for builders to help them understand the importance of BMPs and obligations under the County's Ordinance. The builders are informed of the penalty possibilities for failure to comply with the Ordinance. The Construction BMP educational program is a partnership effort with the Homebuilders Association of Alabama and other local MS4 jurisdictions. Each year the participating MS4 jurisdictions take turns hosting the events. In addition, DDS promotes other trainings, such as the QCI, at the front counter when Land Disturbing Activity permits are issued and provide educational brochures for proper BMP installation.

5. Post-Construction Stormwater Management in Qualifying New Development and Re-Development: The Permittee shall develop and implement a program to address the discharge of pollutants in post-construction stormwater runoff to the MS4 from qualifying new development and re-development.

Jefferson County DDS and R&T will develop and implement project review and enforcement procedures for qualifying new development and redevelopment projects within the timeframe specified in ALS000001. Staff from these departments will require landowners and developers to implement systems of appropriate structural and/or non-structural BMPs to reduce the discharge of pollutants to the MEP. Jefferson County will require, to the MEP, post-construction mimic pre-construction hydrology. Currently, DDS staff promote the use of low impact development (LID) practices from the *LID Handbook* during pre-construction meetings with landowners and developers.

6. Spill Prevention and Response: The Permittee will implement a program to prevent, contain, and respond to spills that may discharge into the MS4.

Jefferson County Fire Departments are responsible for conducting Pre-Fire inspections initially, followed by routine and compliance inspections, and spill response at facilities reporting under SARA Title III, Tier II. Area Fire Departments have SOPs for the inspections that include identification of hazardous materials and verification of the facility's Spill Prevention Containment and Countermeasures (SPCC) Plan. State and federal regulations require Fire Departments to receive mandatory training and be certified. Firefighters are required to maintain Hazmat Awareness and Operations and Hazmat Technical certifications in addition to monthly trainings. Jefferson County Fire Departments have mutual and automatic agreements for aid through cooperation with the EMA and local Hazmat Units in the area to address immediate concerns in the event additional cleanup is required. The EMA has developed a uniform plan for responding to incidents and is included in [Appendix E](#). Each year the EMA provides data to satisfy the spill response requirements of ALS000001.

Jefferson County’s DDS, ESD, GSD, R&T, and FM have staff that annually attend a Chemical Spill Response Training and receive certifications for Hazardous Materials Operations. The DDS and ESD staff perform inspections throughout unincorporated Jefferson County and are therefore trained to respond to spills that may discharge into the MS4. The procedures to provide training of personnel are coordinated by DDS staff and conducted by Sigma Consulting and Training, Inc.

7. Pollution Prevention/Good Housekeeping for County Operations: The Permittee shall implement and maintain a program that will prevent or reduce the discharge of pollutants in stormwater runoff from County operations to the MEP.

Jefferson County has an inventory of all County facilities GSD maintains and facilities that have the potential to discharge pollutants via stormwater runoff. Examples from the inventory include the main and satellite courthouses, the jail, sheriff’s offices, the 2121 Building, and the facilities listed in Table 1 which have the potential to discharge pollutants via stormwater runoff.

Site Name	Address	City	St	Zip
Center Point	2651 Center Point Pkwy	Center Point	AL	35215
Camp Ketona	131 County Shop Rd	Birmingham	AL	35217
Downtown Pumps	2420 8th Ave N	Birmingham	AL	35234
Camp Bessemer	3295 King St	Bessemer	AL	35023
Forestdale	341 Faust Ct	Forestdale	AL	35214
Shades Valley	1295 Oak Grove Rd	Homewood	AL	35209

Table 1. Jefferson County fueling stations.

The facilities above are inspected every month to ensure spill prevention and other safety equipment are properly working. They are also checked for overall structure and equipment safety and operation.

Jefferson County DDS and R&T will continue the established strategy and program for preventing and removing trash from the MS4 permitted area to estimate the removal of trash per year and include the totals in the Annual Report. The SOPs for activities are maintained at the respective R&T Camps (Ketona and Bessemer).

Trash receptacles are located and maintained either daily or as needed in high trash generating areas of Jefferson County facilities. Street sweeping occurs on a daily basis in the County owned parking decks and parking lot adjacent to the Courthouse. The parking deck of the 2121 building is swept once a month. External building inspections are completed on a daily basis. All of the work orders and checklists in GSD are managed through the Angus software application. An

example of the work orders and an associated checklist is included in [Appendix D](#). The training for Good Housekeeping at County facilities is completed on the job by trained employees for the various tasks to be performed.

A seven video module training series is being offered to Jefferson County departments to provide their staff with information on stormwater BMPs, good housekeeping and targeted pollutants for various activities that are implemented. These modules include: Preventing Stormwater Pollution: What We Can Do?; Materials Storage and Spill cleanup; Parks and Grounds Maintenance; Fleet Maintenance; Streets and Drainage Maintenance; Land Disturbances; and Solid Waste Operations. A record of staff trainings will be kept in digital format. Currently, there are plans to determine the feasibility of requiring the video training to be viewed by all newly hired employees at Jefferson County during the on-boarding procedures.

8. Application of Pesticide, Herbicide, and Fertilizers (PHFs): The Permittee shall implement controls to reduce, to the MEP, the discharge of pollutants related to the storage and application of PHFs applied by employees or contractors, to public rights of way and other public property.

Jefferson County Personnel Board (JCPB) certifies lists of perspective employees for the County. The JCPB requires employees holding positions involving the application of pesticides, herbicides and fertilizer obtain/maintain certifications related thereto as a condition of employment. Jefferson County will have on file all certified PHF applicator licenses and training documents for the required positions. Also, the County will document the type, amount, and storage location of pesticides, herbicides, and fertilizers. There are numerous educational materials related to PHFs that DDS has published and promoted.

Local governments are prohibited from passing ordinances regulating pesticides in the State Code of Alabama, Section 2-27-5.1. To comply with the County's MS4 NPDES permit and Alabama Law, the DDS has partnered with the state agency responsible for pesticides, herbicides, and fertilizers. The Alabama Department of Agriculture and Industries is the state agency charged with enforcing laws related to landscaping and pest management. 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. Anyone 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.

During the 2011-2012 Permit Year, DDS staff formalized an agreement with the Alabama Green Industry Training Center (AGITC) through the Alabama Cooperative Extension System (ACES). 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 that identify individuals who are required to obtain state certification and permits.

9. Oils, Toxics, and Household Hazardous Waste Control: The Permittee shall prohibit to the MEP the discharge or disposal of used motor vehicle fluids and household hazardous waste into the MS4.

The DDS will continue to operate a program focused on oils, toxics, and household hazardous waste. Jefferson County DDS has plans in place to continue partnering with other MS4 jurisdictions as well as appropriate licensed and certified vendors to offer periodic household hazardous waste collection events for the public to properly dispose of these items.

The DDS staff will continue to promote the ESD's used cooking oil recycling program and the locations of the 22 used cooking oil recycling centers through the Clean Water Awareness Campaign. The used cooking oil recycling program is promoted at events, in presentations and publications, and through the County website, Facebook and Twitter.

The DDS staff will continue to promote the proper disposal of used motor vehicle fluids through the Clean Water Awareness Campaign. Proper disposal of used motor vehicle fluids is promoted in presentations, posters, a vehicle maintenance brochure, and newsletter articles.

Jefferson County DDS staff created a Good Housekeeping Practices brochure for businesses which is being distributed to individuals who apply for or renew a business license at the main courthouse and the County's satellite locations. This brochure makes business owners aware of their responsibility to implement Good Housekeeping Practices to prevent stormwater pollution. The brochure contains information applicable to a variety of business sectors, including the proper disposal of used motor vehicle fluids.

Educational information on oils, toxics, and household hazardous waste control are included on the website, poster displays, and through the Clean Water Awareness Campaign.

10. Industrial Stormwater Runoff: The Permittee shall implement a program to inspect, monitor and control pollutants in stormwater runoff to the MS4 from municipal waste landfill, hazardous waste treatment, storage, disposal and recovery facilities, and industrial facilities and high risk commercial facilities.

The DDS staff performs annual inspections of the County's landfill and transfer stations. Jefferson County Fire Departments are responsible for conducting Pre-Fire inspections initially, followed by routine and compliance inspections, and spill response at facilities reporting under SARA Title III, Tier II in unincorporated Jefferson County. Area Fire Departments have SOPs for the inspections that include identification of hazardous materials and verification of the facility's Spill Prevention Containment and Countermeasures (SPCC) Plan. Please see [Appendix E](#) for a list of the qualifying facilities in unincorporated Jefferson County, the landfills, and transfer stations.

Monitoring and Reporting: The Permittee shall implement a monitoring program to provide data to assess the effectiveness and adequacy of BMPs.

Jefferson County has established monitoring locations at six sites on the following waterbodies: Five Mile Creek, Shades Creek, Turkey Creek, Valley Creek, and Village Creek. It is the intent to collect samples during wet and dry weather on a quarterly basis, weather permitting.

The sampling location on Five Mile Creek is off Coalburg Rd (33.59806, -86.86801) and the landuse is characterized by undeveloped and low density residential.

The Shades Creek sampling site is off Dickey Springs Rd (33.32568, -86.94914) with landuse characterized predominantly as undeveloped, agricultural, with few light industrial areas.

Two sites on Turkey Creek are monitored. One is within the Jefferson County Water Reclamation Facility property near Narrows Rd (33.70938, -86.69634) and the landuse is largely characterized as undeveloped, agriculture, low density residential, and recreation. The second site is located near Doss Hollow Rd (33.75665, -86.8254) having similar landuse characteristics as the first.

The sampling site on Valley Creek is below the Lock 17 Rd bridge (33.44738, -87.12154) and the landuse upstream is characterized as mostly undeveloped, low density residential, and heavy industrial associated with large mining tracts.

The location of the Village Creek site is near Minor Pkwy (33.5479, -86.92603) with the most diverse landuse of all the sites. The basin consists of low-density residential, medium-density residential, high-density residential, light industrial, heavy industrial, with fewer undeveloped areas. A map of the sampling locations a provided in Figure 2.

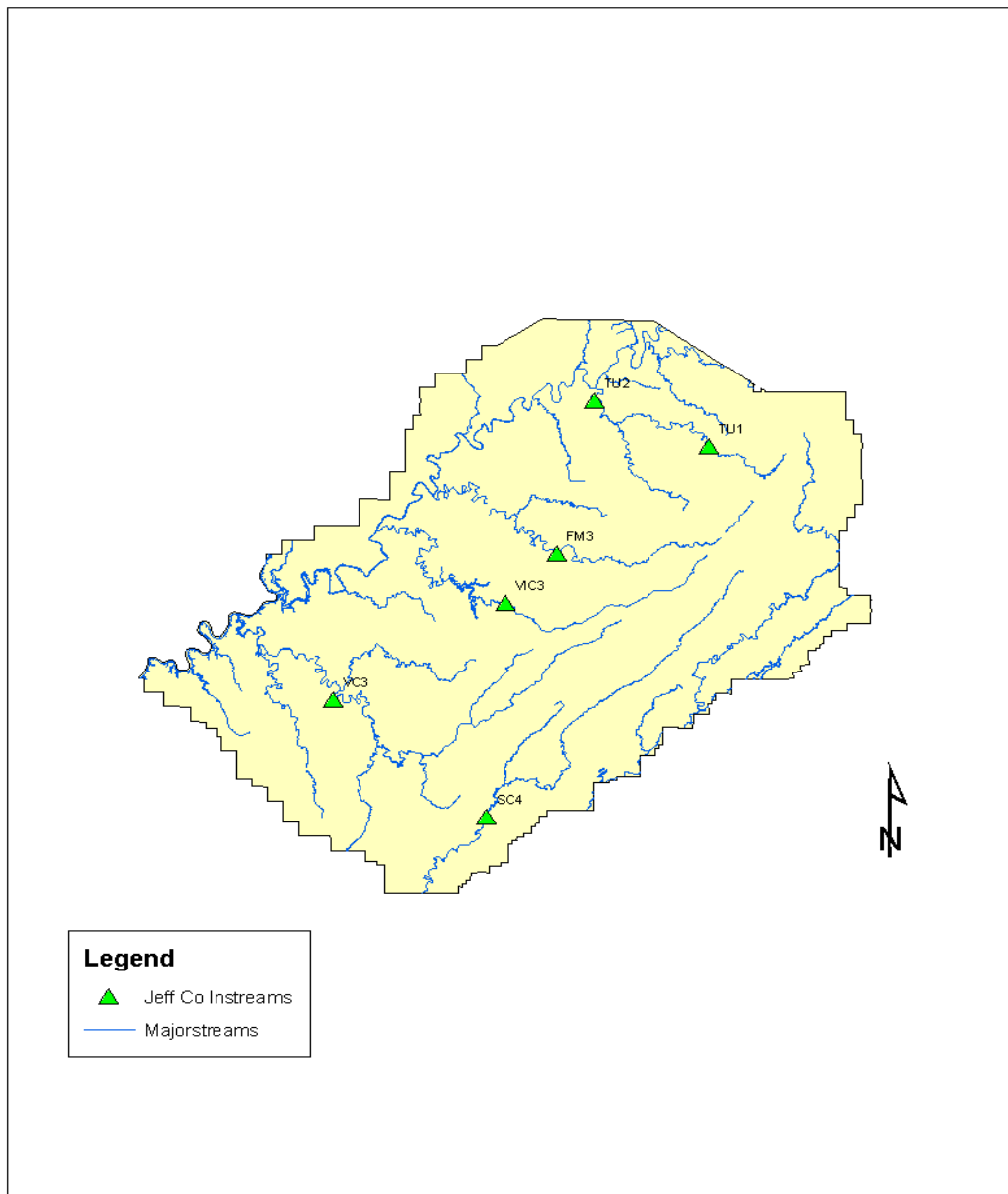


Figure 2. Instream locations in unincorporated Jefferson County
Jefferson County DDS will have the wet and dry samples analyzed for the parameters listed in Table 2.

Biological Oxygen Demand (BOD5)	Total Lead	Total Phosphorus
Total Aluminum	Total Magnesium	Total Potassium
Total Barium	Nitrate Nitrogen	Total Silicon
Total Calcium	Nitrite Nitrogen	Total Sodium
Chemical Oxygen Demand (COD)	Total Kjeldahl Nitrogen	Total Strontium
E. Coli	pH	Total Suspended Solids (TSS)

Total Iron	Ortho-Phosphate	Total Dissolved Solids (TDS)
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Table 2. Parameters for analyzation of instream samples.