#### Stormwater Management Program Plan

Jefferson County, Alabama



Department of Roads and Transportation Room A-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 to manage pollution from non-point sources. This program requires 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 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 by the EPA to issue NPDES permits.

#### **State Regulations**

In 1995, ADEM issued municipal NPDES Permit ALS000001 to 23 co-permittees, including unincorporated Jefferson County, AL, to designate the region as a Phase I jurisdiction. Jefferson County complied with the permit through a cooperative arrangement with the other copermittees. 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, the Jefferson County Commission was issued a new MS4 Individual Phase I Permit because the previous permit expired in October 2006. On December 18, 2024, the County's renewed Phase I Permit was finalized after having been on public notice for community review.

#### **Permit Applicability and Coverage**

#### MS4 Coverage and Eligibility

Permit ALS000001 applies to unincorporated areas within the corporate boundaries of Jefferson County. Figure 1 shows the unincorporated area of Jefferson County.

### Jefferson County Unincorporated Area

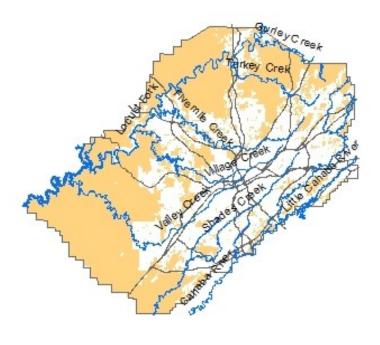




Figure 1. Unincorporated area of Jefferson County shown yellow.

#### 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 Jefferson County or ADEM determines them 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 Department)
- c. Diverted stream flows
- d. Uncontaminated ground water infiltration
- e. Uncontaminated pumped groundwater
- f. Discharges from potable water sources

- g. Foundation and footing drains
- h. Air conditioning drains
- i. Irrigation water (not consisting of treated, or untreated, wastewater unless authorized by the Department)
- j. Rising ground water
- k. Springs
- 1. Water from crawl space pumps
- m. Lawn watering runoff
- n. Individual residential car washing, to include charitable carwashes
- o. Residual street wash water
- p. Discharge or flows from firefighting activities (including fire hydrant flushing)
- q. Flows from riparian habitats and wetlands
- r. Dechlorinated swimming pool discharges
- s. Discharges authorized and in compliance with a separate NPDES permit

#### **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 Part II.B of the MS4 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:

Roads and Transportation Department 716 Richard Arrington, Jr. Boulevard North Room A-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 of the previous year.

#### 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 in 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. In October 2023, the Stormwater Division and the stormwater management program responsibility were moved to the Roads and Transportation Department (R&T). Employees of R&T will continue to implement Jefferson County's Stormwater Program and coordinate program information between the following Jefferson County entities: DDS, 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. Duties include but are 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. The settlement ponds and check dams are inspected biweekly, at a minimum. Routine maintenance and sediment removal occur at least twice a year. The detention ponds are inspected and water quality monitoring is completed annually. 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 maintenance activities are tracked in Cityworks Asset Management software program. The R&T will continue to provide the amount of floatables, litter, debris, and sediment removed, if applicable, 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 R&T 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 at 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 is included on the R&T 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 R&T 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 describing best stormwater management practices
- Flyers promoting participation in events that are distributed to the public
- A yearly stormwater calendar that uses local venues to illustrate stormwater management practices is created and distributed to the public
- Sharing information on pollutants, housekeeping practices, and community events in JeffCo News, the digital newsletter from the Jefferson County Public Information Office.
- Stormwater education festivals and outdoor classrooms are created and offered to school-age children
- Every kindergarten, first, and second-grade student within the Jefferson County Board of Education school system will receive a 16-page student activity book that focuses on personal responsibility and the impact of litter and other pollutants on the stormwater drainage system
- 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

The campaign items deliver stormwater pollution prevention information in a highly visual manner to attract attention while overcoming language barriers. They utilize catchy headlines and taglines to engage the public further. Posters are on display at the Jefferson County DDS office in the Downtown Courthouse.

The R&T staff periodically assesses the effectiveness of its Public Education and Involvement Program through public questionnaires. These questionnaires are administered during public events, seminars, workshops, and are available on the County's webpage. Staff attend local events and community meetings, give presentations, and display information on tables or booths so the public can learn about upcoming program events and education campaigns.

A seven-video module training series is offered to county department staff, which includes 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 pieces of training will be kept on file.

A brochure entitled *Good Housekeeping Practices for Businesses* was created and is being/has been 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 when conducting business or performing services

to prevent polluted stormwater runoff from entering the storm drainage system and provide key stormwater BMPs that can be implemented.

The Stormwater Education staff will assist the Stormwater Program staff responsible for implementing Article 14 of Jefferson County's Subdivision and Construction Regulations in planning and facilitating a periodic Low Impact Development/Green Infrastructure (LID/GI) Workshop for developers, engineers, land use planners, County personnel, etc.

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

The R&T 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, and is included in Appendix C.

The R&T staff will carry out dry weather screening on outfalls - 36-inch 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 more frequently to be determined by initial findings. The inspections will be conducted in dry weather at least 72 hours after a 0.1-inch rain event. If a flow is observed, staff will measure field parameters such as pH, temperature, and dissolved oxygen, if necessary. Staff will 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, R&T staff may collect and submit a water quality sample 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 will follow the Enforcement Authority steps of the Enforcement and Abatement section in Article 13. If the source of the illicit discharge is from an adjacent MS4, R&T staff will notify ADEM's Birmingham Field Office, log a complaint via the ADEM website, and contact a representative from the MS4 jurisdiction.

R&T has established and promotes a hotline for the public to report illicit discharges. A training series consisting of seven videos is being provided to Jefferson County departments to educate staff about stormwater best management practices (BMPs), illicit discharges, good housekeeping

practices, and targeted pollutants linked to various activities. Additionally, the basic Stormwater Overview module is accessible for all staff to view on DevelopU, the county-wide learning platform.

The Jefferson County ESD continues to perform routine maintenance and inspections of its sanitary sewer lines to find infiltration and inflow and eliminate unpermitted 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 and help reduce sanitary 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.

R&T requires that construction sites be covered by 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 Regulations 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. County inspectors maintain Quality Control Inspector (QCI) certifications to be able to verify the proper use and maintenance of appropriate BMPs. County inspectors verify BMPs before land disturbance occurs, during construction, and at the completion of land disturbing activities. 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 an NOV may result in a cease and desist order 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 a software system. The inspection frequency follows the requirements in NPDES Permit ALS000001.

County staff participate with other MS4 entities in Jefferson County in an educational program for builders to teach the importance of BMPs and obligations under the County's Article 13 *Erosion and Sedimentation* of the Subdivision and Construction Regulations. The builders are informed of the possible penalties for failure to comply. The construction BMP educational program is a partnership effort with the Homebuilders Association of Alabama and other local MS4 jurisdictions. In addition, the County promotes other training, such as QCI and provides 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.

Article 14, *Post-Construction*, of the Jefferson County Subdivision and Construction Regulations, included in Appendix C, requires all qualifying new development and redevelopment sites to implement adequate systems of structural or non-structural BMPs to reduce the discharge of pollutants to the MEP. Currently, landowners and developers submit new development and re-development site plans electronically, showing the planned BMPs. The Stormwater Program staff review the submissions, comparing the plans with requirements.

During construction, staff inspect the BMPs to ensure that they are built in accordance with the plans/requirements. Landowners and developers are encouraged to

- Implement and enforce performance standards
- Ensure adequate long-term operation and maintenance of BMPs
- Complete post-construction inspections, including tracking and enforcement actions
- Use low impact development practices as presented in the LID Handbook

Landowners and developers of all new qualifying sites must submit the following additional information as part of the overall construction site review process:

- Post-construction BMP design forms that are based on a 1.1-inch rainfall over a 24-hour period preceded by a 72-hour dry period.
- Post-Construction BMP Plan.
- An "As-Built" Certification of their post-construction BMPs within 120 days of project completion.
- A signed and notarized Operation and Maintenance Agreement.
- Annual post-inspection and maintenance records before September 30<sup>th</sup> of each year.

## 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 initial, Pre-Fire inspections, routine and compliance inspections, and completing spill response at facilities reporting under SARA Title III, Tier II. Area Fire Departments have SOPs for 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 Department personnel to receive mandatory training and maintain Hazmat Awareness and Operations and Hazmat Technical Certifications in addition to various monthly training courses. Jefferson County Fire Departments have mutual and automatic agreements to aid in cooperation with the EMA and local Hazmat Units to address concerns if extensive cleanup is required. The EMA has developed a uniform plan for responding to incidents and this plan is included in Appendix E. Each year the EMA provides data regarding spill responses for the Annual Report required by NPDES Permit ALS000001.

Jefferson County's DDS, ESD, GSD, R&T, and FM have staff that annually attend Chemical Spill Response Training and receive certifications for Hazardous Materials Operations. The R&T and ESD staff perform inspections throughout unincorporated Jefferson County and are trained to respond to spills that may discharge into the MS4. Personnel training is coordinated by R&T staff and conducted by Sigma Consulting and Training, Inc. The training curriculum includes emergency response, reporting requirements, chemical identification, pesticide/chemical activity, personal protective equipment, absorbents, site control, incident command, and other topics. The EMA's Hazardous Mitigation Plan is currently under revision and will be available upon approval.

## 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 County facilities and FM operates facilities that have the potential to discharge pollutants via stormwater runoff. County facilities include the main and satellite courthouses, the jail, Sheriff's offices, the 2121 Building, and the County fueling stations listed below in Table 1.

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	35203
Camp Bessemer	3295 King St	Bessemer	AL	35023
Forestdale	341 Foust 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. A list of all county facilities and a copy of the checklist for the inspections are included in Appendix D.

Jefferson County R&T will continue the established strategy and program for preventing and removing trash from the MS4 area, and to estimate the amount of trash removed each year. The SOPs for these activities are maintained at Camp Ketona and Camp Bessemer.

Trash receptacles are located and emptied daily or as needed in high trash generating areas of Jefferson County facilities. Street sweeping occurs daily in the County owned parking decks and parking lot adjacent to the downtown Courthouse. External building inspections are completed daily. All the work orders and checklists in GSD are managed through a software application.

An example of a work order and an inspection checklist are included in Appendix D. The training for Good Housekeeping at County facilities is completed on the job by trained employees.

A seven-video module training series is offered to Jefferson County personnel to provide information on stormwater BMPs, good housekeeping, and targeted pollutants for various activities. 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. The basic Stormwater Overview module is accessible for all staff to view on DevelopU, the county-wide learning platform. A record of staff training is kept in digital format.

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 prospective employees for the County. The JCPB requires employees in positions involving pesticide, herbicide and fertilizer application obtain/maintain certifications related thereto as a condition of employment. Jefferson County has on file all certified PHF Applicator Licenses and training documents for the required positions. Jefferson County applicators apply PHFs judiciously and refrain from applying outside county rights-of-way. Jefferson County documents the type, amount, and storage location of PHFs. There are numerous educational materials related to PHFs that R&T 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 Jefferson County's MS4 NPDES Permit and Alabama Law, R&T has partnered with the Alabama Department of Agriculture and Industries (ADAI), the state agency charged with enforcing laws related to pesticides, herbicides, fertilizers, landscaping and pest management. The Commissioner of ADAI administers and enforces all pesticide regulations. The Pesticide Management Section of ADAI regulates individuals and companies that sell, use, or supervise the use of pesticides, engage in the commercial application of pesticides, and structural pest control or horticultural activities. Anyone dealing with pesticides, herbicides, or fertilizers must be licensed by the ADAI Pesticide Management Section. Anyone who is applying pesticides, installing plants, or designing landscapes for a fee must pass a certification exam and maintain the license to legally operate in Alabama.

9. Jefferson County has an agreement with the Alabama Green Industry Training Center (AGITC) through the Alabama Cooperative Extension System (ACES). The AGITC is a local agency recognized by the ADAI and the ACES as a provider of workshops, training, and testing to fulfill state regulations that identify individuals required to obtain state certification and permits. 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 R&T will continue to operate a program focused on oils, toxics, and household hazardous waste. Jefferson County R&T plans to continue partnering with other MS4 jurisdictions and appropriately licensed and certified vendors to offer periodic household hazardous waste collection events so that the public can properly dispose these items.

The R&T staff will continue to promote the ESD's used cooking oil recycling program and the 2 used cooking oil recycling center locations. The program is promoted through the Clean Water Awareness Campaign at events, in presentations and publications, and on the County website, Facebook, and Twitter.

The R&T staff will continue to promote the proper disposal of used motor vehicle fluids, which includes presentations, posters, a vehicle maintenance brochure, and newsletter articles.

Jefferson County staff has created a brochure titled "Good Housekeeping Practices" for businesses. This brochure is being distributed to individuals applying for or renewing a business license at the County's main courthouse and the three satellite locations. It informs business owners about their responsibility to implement Good Housekeeping Practices to prevent stormwater pollution. The brochure includes relevant information for various business sectors, including guidelines for 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 R&T staff perform annual inspections of the County's landfill and transfer stations. Jefferson County Fire Departments conduct Pre-Fire Inspections, followed by routine and compliance inspections, as well as 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 quarterly, weather permitting.

The sampling location on Five Mile Creek (FM3) is off Coalburg Road (33.59806, -86.86801) and the adjacent land use is characterized by undeveloped and low density residential.

The Shades Creek sampling site (SC4) is off Dickey Springs Road (33.32568, -86.94914) with adjacent land use characterized predominantly as undeveloped, agricultural, with few light industrial areas.

Two sites on Turkey Creek (TU1 and TU2) are monitored. One is within the Jefferson County Water Reclamation Facility property near Narrows Road (33.70938, -86.69634) And the second site is located near Doss Hollow Road (33.75665, -86.8254). At both locations, the adjacent land use is largely characterized as undeveloped, agriculture, low density residential, and recreation. The sampling site on Valley Creek (VC4) is upstream of the Valley Creek Water Reclamation Facility 33.39276111, -87.00307722) and the adjacent land use upstream is characterized as mostly undeveloped, low density residential, and heavy industrial associated with large mining tracts.

The location of the Village Creek site (VIC3) was relocated just upstream of Minor Parkway, near Avenue E (33.524928, -86.891511). This location has 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, and a few undeveloped areas. A map of the sampling locations is provided in Figure 2.

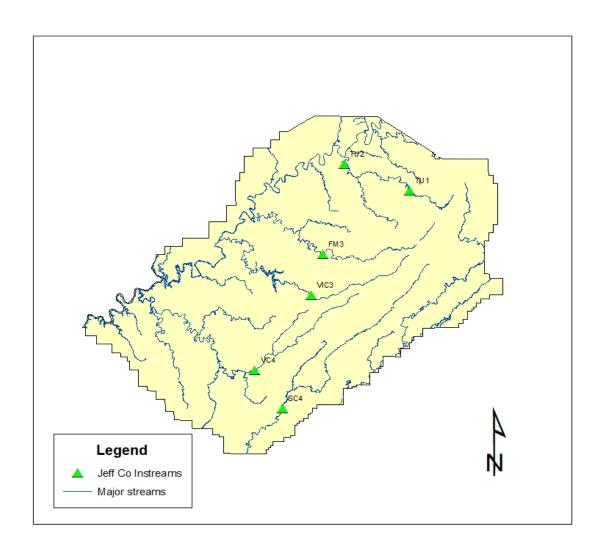


Figure 2. Instream locations in unincorporated Jefferson County

Jefferson County 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	Total Zinc	Total Suspended Solids (TSS)
Total Iron	Orthophosphate	Total Dissolved Solids (TDS)
pН		

**Table 2.** Parameters for analyzation of instream samples.