

Stormwater Management Program Plan

Jefferson County, Alabama



**Department of Roads and Transportation
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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 co-permittees. The permit was renewed in 2001 and was extended under 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, ADEM issued the Jefferson County Commission a new MS4 Individual Phase I Permit because the previous permit expired in October 2006.

ADEM issued a new permit to the Jefferson County Commission on December 18, 2024.

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 updated MS4 unincorporated area of Jefferson County reflecting annexations that took place during FY 2024-2025.

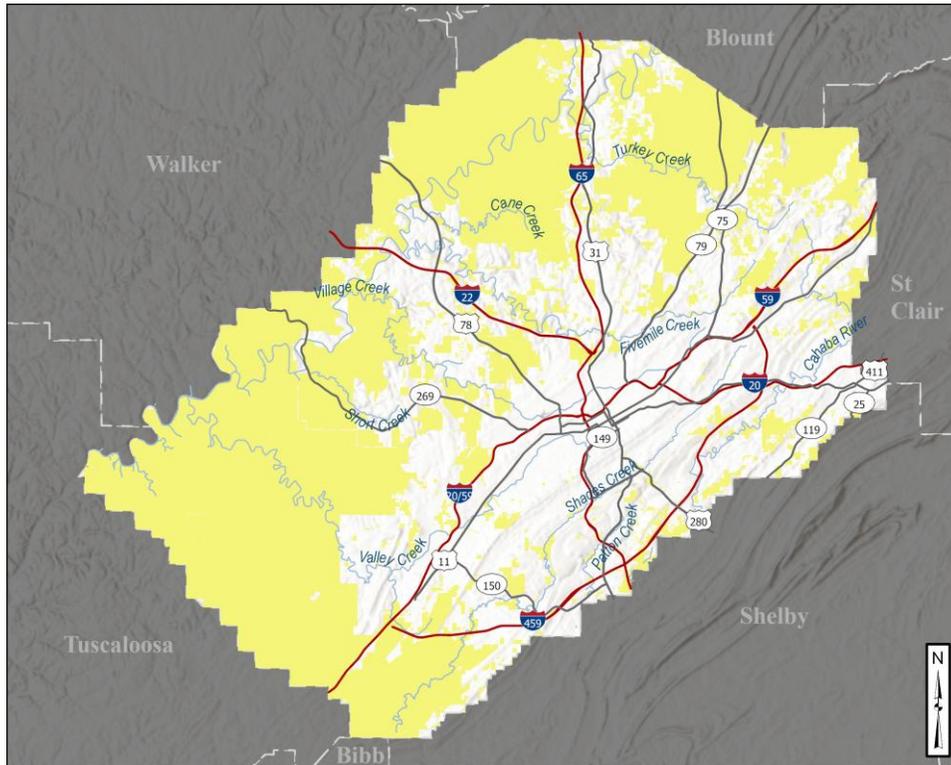


Figure 1. Unincorporated area of Jefferson County is shown yellow.

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
- l. 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., Jefferson 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

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

Reporting

Jefferson 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 responsibilities were moved to the Roads and Transportation Department (RTD). Employees of RTD 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).

Jefferson County Commission intends 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 Jefferson 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 Jefferson 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 RTD will continue to clean, inspect and repair MS4 drainage structure controls within Jefferson County owned properties and rights-of-way, as needed. The RTD will stabilize and re-vegetate eroded areas. The RTD maintains maps of the structural controls. The settlement ponds and check dams are inspected biweekly, at a minimum. Routine maintenance and sediment removal occur as needed. 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 RTD Camps (Ketona and Bessemer). The maintenance activities are tracked in Cityworks Asset Management software program. RTD will continue to provide the amount of floatables, litter, debris, and sediment removed 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 RTD staff will continuously implement a public education and outreach program to inform the community about the impacts of stormwater discharges on local water bodies and the actions the public can take to reduce pollutants in stormwater runoff to the Maximum Extent Practicable (MEP).

Public input will be collected, at a minimum, through surveys at annual public events, workshops, and seminars. The feedback gathered will be used in the development, revision, and implementation of the Stormwater Management Program Plan (SWMPP), available on the RTD website.

The Public Education and Involvement Program will address targeted pollutants, such as trash, household hazardous waste, prescription drugs, yard debris, pesticides, herbicides, fertilizers, pet waste, vehicle fluids, and issues resulting from sanitary sewer overflows caused by fats, oils, grease, and sanitary wipes, with various outreach efforts.

To specifically address litter, trash, and floatables, Jefferson County will:

- Stamp new and replaced storm drain lids with a message encouraging the public not to dump anything down the storm drain.
- Install roadway signs that can be viewed from both directions at designated creek locations. These signs will display the water body name and a pollution reporting hotline number.
- Partner with the Jefferson County Board of Education to promote student involvement in anti-litter programs, such as a video competition among high school students and 16-page activity books designed for Pre-K through fourth-grade students.

- Collaborate with Alabama People Against a Litter State and Alabama Power's Renew Our Rivers volunteer litter cleanup programs. Volunteers will be provided with litter cleanup materials, and Jefferson County will coordinate the pickup and disposal of collected items. The goal is to engage residents, community groups, and students in volunteer litter cleanups along roadways, ditches, and streambanks, empowering individuals of all ages to model proper trash disposal behaviors.

Jefferson County will use the Clean Water Awareness Campaign to educate the public and encourage behavioral changes that reduce polluted stormwater runoff from improper disposal of targeted pollutants. The campaign's goals are to enhance the general understanding of the stormwater drainage system, provide guidance on recognizing and reporting suspected water pollution, and introduce low-impact development techniques to minimize runoff during rainfall events. This initiative will be tailored to address Jefferson County's diverse population and geographical challenges. Key components of the campaign will include:

- An annual printed stormwater calendar, posters, brochures, flyers, and paid advertising.
- Seminars and workshops on green infrastructure, water quality monitoring, erosion and sedimentation control, prudent yard care practices, and techniques for protecting and reusing rainwater. Materials and resources are available both in print and digital formats on Jefferson County's website.
- Tailored presentations and informational booths at public events to educate residents on clean water awareness, how to report suspected water pollution, and to distribute educational materials. Interactive, hands-on games will be used to engage the public and reinforce proper disposal habits for trash, household hazardous waste, pet waste, and sanitary wipes.

A series of seven video training modules covering stormwater Best Management Practices (BMPs), good housekeeping, and targeted pollutants for various activities is available for Jefferson County department staff. The Stormwater Overview module is accessible to all staff on DevelopU, the countywide learning platform, and records of staff training will be kept on file.

Additionally, a brochure titled "Good Housekeeping Practices for Businesses" has been created and is available for business owners applying for or renewing a business license at the Main Courthouse and at the Hoover, Center Point, and Northern Satellite Courthouse locations.

The Stormwater staff will use Articles 13 and 14 of Jefferson County's Subdivision and Construction Regulations to plan and conduct workshops for residents, developers, engineers, land-use planners, Jefferson County personnel, and others.

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

The RTD maintains the locations of outfalls and waterways using ESRI's ArcPro software. See **Appendix B** for a map of the major outfalls, description, 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 RTD staff will carry out dry weather screening on outfalls 36-inches 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, may be screened more frequently based on 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, RTD 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, RTD staff will notify ADEM's Birmingham Field Office, log a complaint via the ADEM website, and contact a representative from the MS4 jurisdiction.

RTD 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 BMPs, illicit discharges, good housekeeping practices, and targeted pollutants linked to various activities.

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.

RTD 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.

Jefferson County continues to maintain a hotline for citizens to report pollution discharges from construction sites. Jefferson County inspectors maintain Qualified Credentialed Inspector (QCI)

certifications to be able to verify the proper use and maintenance of appropriate BMPs. Jefferson 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.

Jefferson 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 Jefferson 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, Jefferson County promotes other training, such as QCI and provides educational brochures for proper BMP installation.

The construction site inspection schedule will be in accordance with Part II.B.4.a.6.

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 ([POST CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE No O 592 1 7.pdf](#)), included in **Appendix C** requires all qualifying new development and re-development sites to implement adequate systems of structural or non-structural BMPs to reduce the discharge of pollutants to the MEP. The Ordinance includes procedures to implement and enforce performance standards.

A plans requirement document, *Erosion and Sedimentation Control Measures for Commercial Projects (Plans Requirements)* is available for download on Jefferson County's website: https://www.jccal.org/Sites/Jefferson_County/Documents/Storm%20Water/Commercial-ESC-Permit-Checklist-Janaury2025.pdf. The document provides a link to the LID/GI handbook. Currently, landowners and developers submit new development and re-development site plans electronically, showing the planned BMPs. The Stormwater Program staff reviews the submissions, comparing the plans with requirements.

During construction, staff inspect the BMPs to ensure that they are built in accordance with the approved 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.
- Signed and notarized Operation and Maintenance (O&M) Agreement are required for all qualifying sites. Non-subdivision construction sites must submit the O&M Agreement as part of the permitting procedure. Those applying for subdivisions do not get a signed plat until the agreement has been submitted.
- An “As-Built” Certification of their BMPs must be submitted before a Certificate of Occupancy is issued.
- Annual post-inspection and maintenance records before September 30th of each year. Jefferson County’s software, Accela, sends up to four automatic reminder emails for inspections starting in July.

An inventory of the post-construction structural controls is currently being developed. Past site plans will be reviewed to track the BMPs at each site in addition to incorporating newly submitted plans.

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 cooperate with the EMA and local Hazmat Units to address concerns about if extensive cleanup. 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, and RTD have staff that annually attend Chemical Spill Response Training and receive certifications for Hazardous Materials Operations. The RTD 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 RTD 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 Jefferson County facilities and FM operates facilities that have the potential to discharge pollutants via stormwater runoff. County facilities include Camp Ketona, the fleet management center, the operations center, the coroner's office/animal shelter, the jail, and the Jefferson County fueling stations.

These facilities 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 Jefferson County facilities that could discharge pollutants via stormwater runoff and a copy of the checklist for the inspections are included in **Appendix D**.

Jefferson County RTD has staff and vendors that pick up trash at Jefferson County facilities, along the right-of-way and from streams. Jefferson County RTD 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 as needed in Jefferson 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**. Training in Good Housekeeping at Jefferson 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 Jefferson County. The JCPB requires employees in positions involving pesticide, herbicide and fertilizer application to 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 RTD has published and promoted.

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 RTD will continue to operate a program focused on oils, toxics, and household hazardous waste. Jefferson County RTD plans to continue partnering with other MS4 jurisdictions and appropriately licensed and certified vendors to offer periodic household hazardous waste and electronic collection events so that the public can properly dispose of these items.

The RTD staff will continue to promote the ESD's used cooking oil recycling program and the 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 Jefferson County website, Facebook, and Twitter.

The RTD staff will continue to promote the proper disposal of used motor vehicle fluids including presentations, posters, a vehicle maintenance brochure, and print and digital media.

Jefferson County staff has a brochure titled "Good Housekeeping Practices for Businesses". This brochure is available to individuals applying for or renewing a business license at Jefferson 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. This information is available for staff as well as the public.

Educational information on oils, toxics, and household hazardous waste control is included on the website, poster displays, the 12-month stormwater calendar, 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 RTD staff perform annual inspections of Jefferson County's landfill and transfer station. Jefferson County intends to update the data collected on the Landfill Inspection Form to reflect information on ADEM's Inspection Reports, thereby improving consistency. 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 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. Part III.A(2) of Permit ALS000001 requires additional sample locations for waters on the final 303(d) list or that have an approved TMDL. Jefferson County identified three additional sampling locations for 303(d) listed waters as Mud Creek, Little Cahaba River, and Locust Fork River. It is the intent to collect these samples quarterly.

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's outfall (33.39214, -87.00358) 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) is 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. Zinc and pesticides, particularly Dieldrin, will be analyzed from Village Creek, in addition to the 22 pollution parameters listed in Table 2.

The sampling location at Mud Creek (MC1) is located upstream of the Groundhog Rd bridge (33.40268, -87.15691). This new sampling site was established due to the recent inclusion on the final 2024 303(d) list for E. coli. Mining is the dominant landuse in the watershed, coupled with undeveloped and industrial areas.

The Locust Fork River (LF1) sampling location is upstream of the Warrior Kimberly Rd bridge (33.95527, -87.060277). The site was also included on the final 2024 303(d) list for E. coli. Vacant or undeveloped land is the predominant landuse characterization in the watershed.

The Little Cahaba River (LCR1) sampling location is upstream of the Bailey Rd bridge (33.75916, -86.61421). The Little Cahaba River was included on the final 2024 303(d) list for mercury and total dissolved solids (TDS). The source of mercury is due to atmospheric deposition; therefore, Jefferson County will not monitor for mercury. Jefferson County will monitor TDS levels instead. The watershed is made up of undeveloped, agricultural, and recreational landuse. A map of the sampling locations is provided in Figure 2.

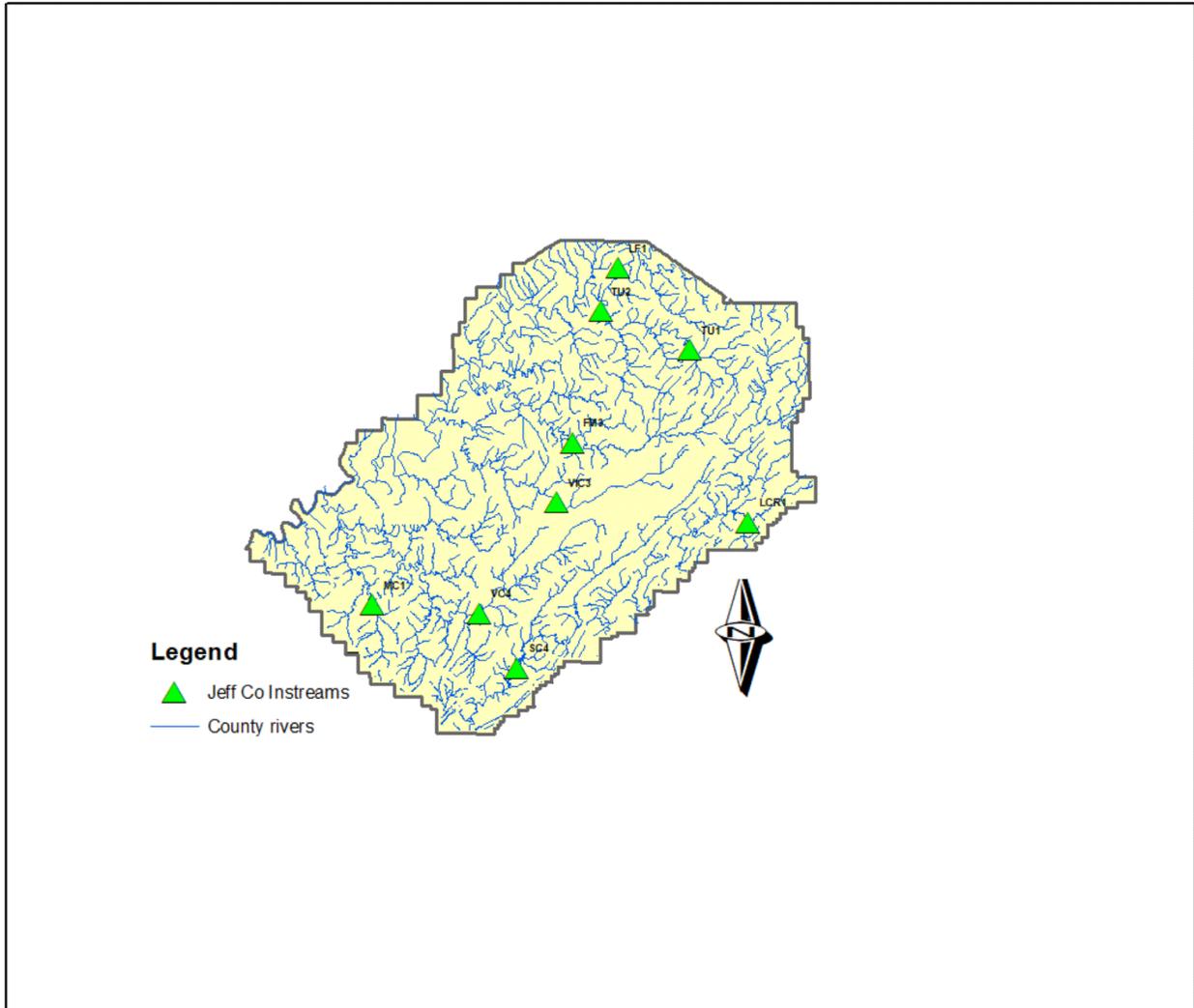


Figure 2. Instream locations in unincorporated Jefferson County

Jefferson County will have most of the samples analyzed for the parameters listed in Table 2; however, samples collected from TMDL and 303(d) listed streams will be analyzed for the respective parameters. While Patton Creek has a TMDL for organic enrichment and dissolved oxygen problems, The portion of Patton Creek that flows through unincorporated Jefferson County is privately owned and not a part of the MS4 Jefferson County owns, operates, or maintains.

Biochemical Oxygen Demand (BOD ₅)	Total Phosphorous
Total Aluminum	Total Potassium
Total Barium	pH
Total Calcium	Total Silicon
Chemical Oxygen Demand (COD)	Total Kjeldahl Nitrogen
Dieldrin (Village Creek Only)	Total Sodium
E. coli	Total Strontium
Total Lead Total Iron	Total Suspended Solids (TSS)
Total Magnesium	Total Dissolved Solids (TDS)
Nitrate Nitrogen	Total Zinc (Village Creek Only)
Nitrite Nitrogen	Orthophosphate
Mercury (Little Cahaba River Only)	

Table 2. Parameters for analysis of instream samples.