

Rutherford County Illicit Discharge Plan

Illicit Discharge Detection and Elimination

Rev. 1-12-2021

Illicit discharge detection and elimination is an important part of a stormwater program because it is necessary to detect and eliminate pollutants entering the local water ways.

- An illicit discharge is defined as any discharge to an MS4 that is not composed entirely of stormwater.
- Discharges are considered illicit when the MS4 is not designed properly to accept, process, or discharge such non-stormwater wastes.
- Illicit discharges are polluted runoff from construction sites, pipes carrying untreated liquid and debris which empty into a water body, cracked sanitary systems, spills, and improper disposal of waste and/or effluent from septic tanks.
- An illicit discharge program involves mapping the storm sewer system, collecting data on outfalls and stream assessments, construction inspection, hot spot identification, inspection and enforcement, illegal dumping, a tracking system, and a hotline.
- Illicit discharges shall be investigated within 7 days of receiving the complaint.
- Illicit discharges should be eliminated within 90 days of the initial report.

Stream Monitoring

Stream monitoring is an important component within the stormwater program. Continual monitoring is conducted by TDEC.

A TMDL (Total Maximum Daily Load) has been written by TDEC for Christmas Creek, Finch Branch, Harpeth River, Hurricane Creek, Kelley Creek, Lytle Creek, and Stewarts Creek, for stream segments within the County's jurisdiction that are impaired with e. coli. A TMDL (Total Maximum Daily Load) has been written by TDEC for Bear Branch, Cheatham Branch, Finch Branch, Harpeth, Hurricane Creek, Jarman Branch, Kelley Creek, Lytle Creek, Olive Branch and Stewarts Creek, for stream segments within the County's jurisdiction that are impaired with sediment. A TMDL (Total Maximum Daily Load) has been written by TDEC for Bear Branch, Harpeth River, Jarman Branch, and Unnamed Trib. to Bradley Creek, for stream segments within the County's jurisdiction that are impaired with low DO/Nutrient. Refer to the TMDL manual guide to review TDEC's TMDL, State's monitoring protocol. The County provides Analytical and Non-Analytical data to TDEC as required in permit.

TDEC Requirements through the Stormwater Permit

4.2.3 Illicit Discharge Detection and Elimination

Permittees shall develop, or modify as necessary, implement and enforce an illicit discharge detection and elimination program. Newly designated permittees shall have this program implemented within 18 months of coverage under this permit. Currently permitted MS4s shall continue to implement their existing illicit discharge detection and elimination program. New permittees must develop, and existing permittees must continue to develop, update and maintain, a storm sewer system map (preferably Geographic Information System based) that shows the location of system outfalls where the municipal storm sewer system discharges into waters of the state or storm sewer systems owned or operated by another MS4 jurisdiction. Updates to the map should be completed within 6 months of the completion of a system modification or addition. The deadline may be extended for larger changes such as large

annexations. The map must be available for review upon request. The map must also show: a. the names and location of waters of the state that receive discharges from those outfalls; b. inputs into the storm sewer collection system, such as the inlets, catch basins, drop structures or other defined contributing points to the sewer shed of that outfall; and c. general direction of stormwater flow. To the extent allowable under state or local law, permittees shall effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges (unless allowed by sub-section 1.3.3.2) into the storm sewer system and implement an appropriate Enforcement Response Plan (ERP). The illicit discharge ordinance and the ERP must be developed and in effect within 18 months of coverage under this permit. Permittees must develop and implement a plan to detect, identify and eliminate non-stormwater discharges, including illegal disposal, throughout the MS4 jurisdiction.

This plan must also include the identification of hot spots. The permittee shall develop and implement standard procedures to be followed to investigate portions of the MS4 jurisdiction that, based on the results of field screening or other identification programs, indicate a reasonable potential of containing illicit discharges. Illicit discharge investigations, and the results of those investigations, shall be documented and include the locations, times, parameters and sampling results, discharge source, and any other pertinent information. The plan to eliminate identified illicit discharges should be completed within 90 days of the initial report, and the discharge eliminated as soon as practicable. All plans and procedures in the IDDE program must be documented in the SWMP.

Procedure Introduction

As part of the mission, Rutherford County hires summer interns from colleges nearby to assist in the monitoring of our local impaired (not fully supporting) streams. This initiative will be conducted in compliance with standards set forth by of the Tennessee Department of Environment and Conservation (TDEC) and the Environmental Protection Agency for Small Municipal Separate Storm Sewer Systems (MS4s) during a permit cycle (TDEC, 2010).

The purpose of this task is to assess the health of the watersheds within the County. This assessment will be composed of objectives that meet the requirements of the City's Phase II MS4 permit. Objectives of this study include the following:

Non-analytical monitoring to include visual stream surveys and impairment inventories, which includes evaluating the physical attributes of the stream corridors, within Rutherford County's MS4. Surveys will include assessments immediately upstream and downstream from discharges from the MS4. Visual stream surveys will be conducted on the not fully supporting streams of our County in a five year rotation. The team is trained with the Maryland Protocol.

All information is gathered into Survey 123 and Collector App (GIS).

Methods

Components of this study will follow specified TDEC methods. Methods for non-analytical monitoring are specified in the general National Pollutant Discharge Elimination System (NPDES) permit requirements for Small MS4s in Tennessee.

Non-Analytical Monitoring

In order to meet the general NPDES permit requirements for small MS4s in Tennessee, non-analytical monitoring is prescribed where discharges from the MS4 have been identified as the source of siltation, habitat alteration, and/or pathogen impairment. To meet this requirement, Visual Stream Surveys and Impairment Inventories must be performed.

At a minimum, a visual stream survey must be performed immediately upstream and downstream of each MS4 outfall that discharges into an impaired segment.

The MS4 shall refer to existing protocols by the Maryland Department Natural Resources (known as the Maryland Protocol).

Stream segments will be surveyed at a rate of approximately .5 to 1.5-stream miles/day. These surveys will take place during dry weather conditions, defined as at least 48 hours after the last runoff producing rain event. Due to the unpredictability of the dry weather requirement, provisions for flexibility in the work schedule have been budgeted.

Hot Spot Determination Procedure and SOP

Non-Municipal Hot Spots

1. *Hot spot* refers to an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. (Ref. Stormwater Ordinance, Definitions.)
2. The MS4 general permit, under which the County is permitted, states:
 - For any types of activities you know to be storm water pollutant hot spots in your area, you must prepare a clear set of requirements with respect to storm water management at these establishments and ensure that the establishments have been made aware of those requirements. (Public Education and Outreach, Section 4.2.1.1.1, p. 11)
 - You must be able, by ordinance or other regulatory mechanism, to prohibit contamination of storm water runoff from hot spots. (Illicit Discharge Detection and Elimination, Section 4.2.3.2, p. 13)
 - *Hot spot* means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in storm water. Examples might include operations producing concrete or asphalt, auto repair shops, auto supply shops, large commercial parking areas, restaurants. (Section 7. Definitions, p. 26)
3. In addition to the County ordinance's prohibition on illicit discharges, there is a provision related to good housekeeping:

Reduction of Stormwater Pollutants by the Use of Best Management Practices. Any person responsible for a property or premises, which is, or may be, the source of an illicit *discharge*, may be required to implement, at the person's expense, the BMP's necessary to prevent the further discharge of pollutants to the Municipal Separate Storm Sewer System. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. (See Ordinance Chapter 7 Section 4).

4. Hot spots of concern to the County are in general the following commercial activities:
 - a. Generating or concentrating automotive fluids in outdoor areas
 - b. Outdoor storage of organic mulch, fertilizer
 - c. Scrap metal recycling
 - d. Restaurants with outdoor storage or disposal of grease
 - e. Truck stops

5. Stormwater runoff quality requirements for hot spots
 - a. Hot spots pre-existing the County's post-construction runoff quality ordinance (2008)
 - i. County ordinances prohibit non-stormwater discharges. Such discharges must be eliminated or permitting through the Tennessee Division of Water Pollution Control.
 - ii. Pollution prevention and good housekeeping should be practiced at these types of facilities, to prevent contamination of stormwater runoff.
 - iii. Staff shall engage the operators of hot spot activities through education, including site inspections and in critical areas and situations by on-site, face-to-face meetings, and where necessary by imposing requirements for better housekeeping, considering:
 - Watershed priorities (impairment, TMDLs, visibility, uses of water)
 - Evidence of actual or potential pollution
 - Other County department's interactions with the business
 - Overall consistency in requirements and enforcement (See Ordinance Chapter 7 Section 4 (above.))
 - b. Hot spots developed after the post-construction runoff quality ordinance (June, 2008)
 - i. County ordinance requires that new development and redevelopment incorporate permanent stormwater management controls that will capture at a minimum, an inch of every rainfall event preceded by 72 hours of no measurable precipitation. The first inch of rainfall must be 100% managed with no Stormwater runoff being discharged to surface waters. In case of limitations the below can be done with a letter in writing from design engineer.
 - ii. County ordinance requires that new development and redevelopment incorporate permanent stormwater management controls that will capture 80% of the total

suspended solids (TSS) that become, or might otherwise become, entrained in stormwater runoff from the developed property. For more detail on this requirement, see the Stormwater Ordinance Chapter 4

- iii. County ordinance requires certain discharge control requirements as well: The post-development rate of runoff for a development shall not exceed the pre-development runoff rate for the 2, 5, 10, 15, 25, and 50-year storm events. See Zoning Ordinance section 14
- iv. Special conditions for hot spots

Activity	Special requirements
Outdoor automotive repair	Separate device or control required for oil and grease treatment; spill protection control
Indoor-only service bays	Control for oil and grease; spill protection must be addressed
Scrap recycling	Separate device or control for oil and grease treatment; spill protection control
Commercial storage of organic mulch	Provide rationale and design for treatment of runoff from organic materials. Normally a filtering mechanism (e.g., sand filter; bioretention) will be required.
Restaurants with outdoor storage of grease	Grease management Drainage to a grass swale or other vegetated area is encouraged, for visibility Water spigot at dumpster and grease storage is prohibited.

- v. Note regarding new hot spots not subject to the post-construction runoff control standard (lot size less than one acre, for instance)

As a rule, the development shall meet the conditions in the table above.

Exceptions can be made, provided the land developer can satisfy the technical considerations of staff.

- 6. The following schedule of education, at a minimum, will be followed, vis-à-vis the requirement of Section 4.2.1.1.1 of the state’s small MS4 general permit issued February, 2003.

#	Year	Target(s)	Action
1	2016	--	--
2	2017	Automotive repair, maintenance Surface cleaners Riparian zone landowners	Brochures at front desk Mail to Business’s Mailout to residents connected to City of Murfreesboro Tree Day Event
3	2018	Automotive businesses General citizenry Riparian zone landowners	Brochures at front desk Mail to Business’s Mailout to residents connected to City of

			Murfreesboro Tree Day Event	
4	2019	Restaurants Riparian zone landowners	Brochures at front desk Mail to Business's Mailout to residents connected to City of Murfreesboro Tree Day Event	
5	2020	Landscaping & Mulch Businesses Riparian zone landowners	Brochures at front desk Mail to Business's Mailout to residents connected to City of Murfreesboro Tree Day Event	
6	2021	Scrap Recycling Riparian zone landowners	Mail to Business's Mailout to residents connected to City of Murfreesboro Tree Day Event	
7	2022	Truck Stops/Parking Lots Riparian zone landowners	Mail to Businesses Mailout to residents connected to City of Murfreesboro Tree Day Event	

a. Development of materials is the responsibility of the Rutherford County stormwater staff.

b. A record of hot spot educational activities shall be kept in the stormwater outreach files. A hot spot is defined as an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Municipal Hot Spot Locations and SOP

Rutherford County defines the following as hot spot locations:

- Rutherford County Landfill
- Rutherford County Maintenance Garage
- Rutherford County Highway Dept.
- Rutherford County Building Maintenance

A SWPPP (stormwater pollution prevention plan) is required under the EPA's NPDES stormwater program for any of the above-mentioned facilities.

Hot Spot Procedure

Purpose

To protect, maintain, and enhance the environment, public health, safety, and general welfare of the citizens of the County by controlling pollutant discharges to the County's storm water system and to maintain and improve the quality of receiving waters into which the storm water flows.

Definition

A hot spot ("priority area") means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Scope

This document identifies the types of establishments the County considers to be stormwater hot spots and sets forth the County's minimum guidelines (suggested Best Management Practices (BMPs) to diminish contamination of stormwater runoff.

General Guidelines (Suggested Best Management Practices (BMPs) for Hot Spots

Good Housekeeping BMPs

1. Never dispose of wash-water to storm drain or pavement; it must be disposed of to the sanitary sewer. Wash-water can be defined as any liquid with cleaner with residual dirt and grime. Examples include mop-water, window cleaning water, and rinse water (rinsing after a cleaner was used). Plain (no residual cleaner) rinse water may be used for irrigating plants. Always check with the sewer department supervisor prior to putting an unconventional waste into the sanitary sewer.
2. Promptly clean up any spill of liquid or solid wastes. Do not hose down an area to clean or handle a spill, unless the liquid will be completely contained, cleaned up and disposed of in sanitary sewer or offsite as appropriate for the waste type. Do not discharge to storm drains, landscaped areas or off-site. Wastes, salvaged materials and recyclables must be properly contained and disposed of.
3. Schedule regular cleaning of areas that collect debris to eliminate particulate and residue buildup. This applies to both exterior and interior areas. Keeping interior areas clean prevents the tracking of contaminants outdoors. Add trash containers, when appropriate, to minimize littering.
4. Evaluate safer alternative products for any job that usually uses toxic or hazardous products. For instance, investigate alternative floor and window cleaners (specialized cleaners), general cleaners, adhesives, paints, and lubricants. When available and cost effective, these products should be used.
5. Do not use drains without knowing whether they flow to the sanitary sewer, storm system or self-contained internal sump. Confirm before using drains to ensure proper disposal.
6. Store equipment and supplies under cover whenever possible. Minimizing contact with stormwater minimizes contaminants from getting into stormwater run-off. Use exterior grade cabinets or containers when exposed to the weather; interior grade cabinets and containers will rust or deteriorate contributing contaminants to stormwater run-off.
7. Dispose solid waste in trash or recycling containers.
8. Have spill response equipment available near the storage of liquid or hazardous substances.
9. Leaking equipment should be equipped with drip-pans, appropriate clean-up materials, and have proper containment.

Storm Drains and Catch Basins BMPs

1. Inspect stormwater drains, grates, inlets, ditches, swales and catch basins as requested.

2. Clean storm grates, inlets, drains, ditches, swales and catch basins to remove the accumulation of debris and sediment. Clean structures as requested to keep debris from accumulating.
3. Promptly repair any damaged or deteriorating structure or any other problems that may compromise the integrity of the stormwater drainage system. Keep a log of stormwater system maintenance.
4. Update facility schematics with any change to the plumbing (to prevent cross connections) or stormwater drain system. Discharges allowed according to the City's stormwater ordinance are the only discharges allowed into the City's stormwater system.
5. Make sure that employees know that storm drains, catch basins and culverts are part of the stormwater collection system; not part of the sanitary sewer system.
6. If filters are used on storm drains, ensure proper installation and maintenance. Document cleaning and maintenance activities.

Solid Waste Management BMPs

1. Keep dumpsters, trashcans and recycling bins covered and properly contained, except when filling or emptying. Schedule pickup frequency to keep trash from holding the cover open. Open lids allow contact with stormwater, which dissolves and transports contaminants into the stormwater system.
2. Do not put liquids or greases in the trash containers. They should be discarded according to the Sewer Department's specifications.
3. Check that the dumpster or trashcan to ensure it is in good condition, with no holes or accumulation of grime. Trash containers should be leak-free.
4. Regularly inspect the trash enclosure and general area for problems such as trash not in the container and accumulation of grease or food on the ground. Clean the trash enclosure as needed to remove any accumulations of grime and/or general trash.
5. Designate an area for trash collection away from storm drains. This allows problems at the trash container to be corrected before reaching the storm drain or flow offsite.
6. Maintain all seals on solid waste collection vehicles to prevent dripping of contaminated material onto pavement and roadways.

Fueling BMPs

1. Discourage topping-off of fuel tanks to reduce accidental spillage. Post "no topping-off" signs at the fuel islands.
2. Promptly clean up any spill of liquid or solid wastes. Do not hose down an area to clean or handle a spill, unless the liquid will be completely contained, cleaned up and disposed of appropriately for the waste type. Do not discharge any liquid to storm drains or offsite.
3. Regularly inspect oil/water separator and sumps; maintain as needed.

Washing and Cleaning BMPs

Use designated wash areas to prevent wash water from entering the storm sewer system.

1. Use phosphate-free, biodegradable soaps, when possible.
2. Do not use solvents.
3. When cleaning vehicles/equipment:
4. Use as little water as possible to avoid having to install erosion and sediment controls for the wash area. High pressure sprayers may use less water than a hose, and should be considered.
5. Use positive shutoff valve to minimize water usage.
6. Clean leaks, drips, and other spills with as little water as possible. Use rags for small spills, a damp mop for general cleanup, and dry absorbent material for larger spills. Use the following three-step method for cleaning floors:
 - a. Clean spills with rags or other absorbent materials.
 - b. Sweep floor using dry absorbent material.
 - c. Mop floor. Mop water may be discharged to the sanitary sewer via a toilet or sink.
7. Keep equipment clean; don't allow excessive build-up of oil and grease.
8. Keep drip pans or containers under the areas that might drip.
9. If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials.

Leak and Spill Control BMPs

1. Perform fluid removal and changes inside or under cover on paved surfaces.
2. Properly store hazardous materials and waste.
3. Have spill cleanup supplies readily available.
4. Use dry cleanup methods.
5. Periodically check vehicles for leaking fluids.

Maintenance BMPs

1. Perform maintenance using indoor facilities instead of outside whenever possible as to protect the stormwater runoff. If maintenance should be done outside, ensure correct procedures are followed where prevention practices for spills and leaks can be practiced if needed.

2. If an outdoor maintenance area is needed, it should be located on a paved concrete surface in order to facilitate cleanup. Use barriers to prevent stormwater runoff from entering the area.
3. Use a secondary containment such as a drain pan or drop cloth to catch spills or leaks. Keep a drip pan under the vehicle when removing hoses, filters, or other parts.
4. Have an ample supply of cleanup materials where they are readily accessible and properly stored.
5. Clean leaks and other spills with as little amount of water as possible. Use rags for small spills, a damp mop for general cleanup and dry absorbent materials for larger spills.
6. Provide spill containment dikes or secondary containment around stored oil and chemical drums.

Inspection or Recordkeeping BMPs

The property owner, or designated manager, will conduct facility inspections. Facility will maintain inspection logs to be reviewed by the Engineering Inspector.

Notification to Hot Spot-Defined Locations

County personnel utilized the Rutherford County Checklist form to determine if a business was classified as a hot spot.

Enforcement

See the Rutherford County Enforcement and Response Plan.

Illegal Dumping

Illegal dumping is either reported by citizen notification (via phone, City website, email, or personal visit to a County office) or by an employee who has noticed the problem. The complainant may also contact the Police Department upon witnessing a dumping event.

Depending on the item(s) wrongly disposed of, Codes Department will be notified to address the situation. If the items are not hazardous, a sanitation or streets and highway crew will be dispatched to remove items (within right of way) and properly dispose of them. Private property owners will be notified of violation via letter. If hazardous materials are involved, the Fire Department will be notified.

Tracking System for IDDE

The County has a telephone number established to receive illicit discharge related complaints – (615)-898-7732. This number is answered during normal business hours.

Illicit discharge reporting is available online. This information is submitted to the Stormwater Coordinator, via email.

IDDE issues are entered into our database and/or GIS as notification of calls and complaints received. Once entered, information is sent via email to the appropriate person(s).

Data collected:

- Name and/or address
- Choose topic
- Add notes and other attachments, if applicable
- Email to interested parties

Press the save button which tells the software program to assign a request number and saves the request as an attachment to an email. The request is then emailed to the appropriate staff personnel (Stormwater Coordinator, Public Works Engineer, etc.)

Upon receipt of notification, the appropriate staff investigates the complaint within 7 days and proceeds accordingly. Enforcement actions are outlined in the Rutherford County's Stormwater Ordinance. Illicit discharges should be remediated within 90 days of the initial complaint.

Interagency Coordination

RC Stormwater coordinates with RC Emergency Management Agency (EMA) on spill and response guidelines. RC EMA uses the Impacted Waterway Guide and ESF3.5 and ESP10 from the Emergency Response Protocol used by the EOC. These guidelines take into account the importance of how spills can impact our local water resources and the significance of cleaning them up properly. All documents and after action items are kept on file with RC EMA.

Illicit Discharge Report Form



Rutherford County Stormwater Department

1 South Public Suite 200

Murfreesboro, TN

37130

Phone: (615) 898-7732

Fax: (615) 898-7823

Date

8/14/13

Name: (optional)

Address:

State:

Zip Code:

Contact Number:

Date Noticed Discharge:

Address / Location of Discharge:

Color of Discharge:

Is discharge going into a waterbody? Yes No

Is discharge going into a waterbody? Yes No

Comments:

Submit by Email

John

2020-2021 RUTHERFORD COUNTY ILLICIT DISCHARGE REPORT

ILLICIT DISCHARGE REPORT

-----A. GENERAL INFORMATION-----

A1. DATE and TIME*

A2. TEMPERATURE

Current temperature - Fahrenheit

A3. INSPECTOR NAME

Person conducting report

A4. OTHER TEAM MEMBERS

Others involved

1000

-----B. PROPERTY INFORMATION-----

B1. PROPERTY TYPE

John

B2. PROPERTY OWNER

Name, Company, Organization, Gov. entity, etc

B3. ADDRESS

B4. CITY

B4.A. TENNESSEE

-----C. DISCAHRGE INFORMATION-----

C1. HOW LONG SINCE LAST RAINFALL

C2. NATURE OF DISCHARGE OR FLOW

C3. IF POSSIBLE, IDENTIFY THE SOURCE OF THE DISCAHRGE

C3a. DESCRIBE CONDITIONS

John

C4. POTENTIAL FOR DISCHARGE TO ENTER INTO:

-Please Select-

C5. VISUAL OBSERVATION

	Yes	No
Water Flow?	<input type="radio"/>	<input type="radio"/>
Connection to pipe/inlet	<input type="radio"/>	<input type="radio"/>
Photo Documentation(Add Below)	<input type="radio"/>	<input type="radio"/>

C6. DESCRIBE ODOR

-Please Select-

C7. DESCRIBE CLARITY

Please Select

C8. DESCRIBE COLOR

-Please Select-

C9. SOLIDS AND FLOATABLES

-Please Select-

John

C10. VEGETATION IMPACTS:

Yes

No

Other

C11. DESCRIBE UPSTREAM/SOURCE ORGIN/LAND USE

Please Select-

-----D. REPORT REVIEW-----

D1. FOLLOW UP REQUIRED

Yes

No

Other

D2. RECIPIENT OF FOLLOW UP

D3. NAME AND ADDRESS

1000

D4. EMAIL NEEDED

John

E5. PHOTO 5

Select image file



E6. ADD GEO POINT

Find address or place

Clarksville Nashville Murfreesboro Knoxville Chattanooga Huntsville

Tennessee

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