



City of Smithville, Missouri

Board of Aldermen - Work Session Agenda

Tuesday, September 5, 2023

6:30 p.m. – City Hall Council Chambers and Via Videoconference

Anyone who wishes to view the meeting may do so in real time as it will be streamed live on the City's FaceBook page.


For Public Comment via Zoom, please email your request to the City Clerk at ldrummond@smithvillemo.org prior to the meeting to be sent the meeting Zoom link.

1. Call to Order
2. Discussion – Stormwater Plan – Illicit Discharge
3. Adjourn

Join Zoom Meeting
<https://us02web.zoom.us/j/85040320091>

Meeting ID: 850 4032 0091
Passcode: 630137



	<div>STAFF</div> <div>REPORT</div>
Date:	August 28, 2023
Prepared By:	Mayra Toothman, Asst. to the Public Works Director
Subject:	Illicit Discharge Detection & Elimination Plan and BMPs Maintenance

The City of Smithville holds a Municipal Separate Storm Sewer System (MS4) permit through the Missouri Department of Natural Resources (DNR), which became effective on November 1. This permit has a duration of five years. As part of the MS4 permit requirements, the City is required to undergo an audit and implement certain procedures as part of our stormwater management plan.

DNR Audit and Report

On April 5, staff from the Department of Natural Resources (DNR) conducted an audit of the City of Smithville's Phase II MS4. After the audit, DNR provided a report outlining the highlights of the audit and making specific requests for action. It is noteworthy that many of these requests were promptly addressed by the City of Smithville in line with the commitment to maintaining compliance with the MS4 permit requirements and the City is currently in compliance.

Illicit Discharge Detection and Elimination Plan Submission

One of the requirements of the MS4 permit is having an Illicit Discharge Detection and Elimination (IDDE) plan, which the City didn't have at the time of the audit. Staff developed an IDDE plan, which was submitted to the Department of Natural Resources on April 24. DNR conducted a review of the plan and confirmed that it fully satisfies all the stipulated requirements.

Purpose of the IDDE Plan

An IDDE plan serves as a strategic framework for identifying, reporting, investigating, and eliminating illicit discharges within the City's stormwater system. This plan offers guidelines to City staff who are involved with the execution of the MS4 permit requirements, particularly those relating to the detection and elimination of illicit discharges. The plan establishes a structured approach to identifying any discharges that are not related to stormwater and are not exempted by the City.

Understanding Illicit Discharge

An illicit discharge refers to any discharge, whether direct or indirect, that does not pertain to stormwater and is not sanctioned by the City's regulations. This includes

instances such as improper connections of household sanitary wastewater to the storm sewer, improper disposal of prohibited substances like used motor oil into storm drain catch basins, and the release of pollutants from failing septic systems into the storm sewer network.

Key Components of the IDDE Plan

- **Detection Procedures:** The plan outlines procedures for the identification of potential illicit discharges by both the community and City employees. This includes establishing a clear reporting mechanism for staff when receiving notice from the public to notify the City about any suspected illicit discharges.
 - **Investigation and Tracing:** In the event of a reported or suspected illicit discharge, the plan delineates systematic procedures for tracing the source of the discharge and conducting a thorough investigation to ascertain its nature and origin.
 - **Elimination Strategies:** Once an illicit discharge has been confirmed, the plan provides guidelines for swift and effective elimination of the discharge. This may involve corrective measures, penalties, or other appropriate actions to prevent recurrence.
- Hazardous Material Response:** The plan incorporates collaboration with the Fire District's hazardous material response unit to effectively address situations involving hazardous materials or pollutants.

Ordinance Modification:

A recommended initiative as part of the IDDE plan is the modification of the existing City ordinance to include a provision that requires facility owners or responsible individuals to promptly inform the City if they become aware of or suspect any illicit discharges from their premises.

In addition to the IDDE plan, DNR has also requested the establishment of agreements to oversee the maintenance of Best Management Practices (BMPs) such as retention basins. Staff have prepared an ordinance and relevant materials, which will be reviewed at the next Planning and Zoning Commission meeting.

Both ordinances will be on the agenda at the September 19 meeting, seeking Board approval.



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Illicit Discharge Detection and Elimination Plan



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Illicit Discharge Detection and Elimination Plan

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- IV. Investigation Procedure
- V. Elimination
- VI. Follow-up Procedures
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Illicit Discharge Detection and Elimination Plan

I. Purpose

The purpose of Illicit Discharge Detection and Elimination (IDDE) Plan is to provide guidelines to the City of Smithville staff responsible for the implementation of the requirements of the small municipal separate storm sewer system (MS4) general permit specifically as these requirements relate to illicit discharge detection and elimination (IDDE). This permit has a duration of five years and became effective on November 1, 2021. The City of Smithville is mandated to adhere to the following requirements under this permit:

- Maintain a storm sewer system map with all outfalls identified.
- Adopt and enforce an ordinance to effectively prohibit non-stormwater discharges to the MS4.
- Create a plan to detect and eliminate non-stormwater discharges.
- Identify priority areas of their community for IDDE
- Develop procedures for tracing non-stormwater discharges.
- Create procedures for removing non-stormwater discharges.
- Provide sufficient penalties for effective enforcement.
- Inform public employees, businesses, and general public about IDDE.
- Develop procedures for program evaluation.
- Identify exempt discharges, and

The permit also recommends commercial businesses and industries to conduct an inventory and inspection to assess their potential for non-stormwater discharges.

This document will utilize the following definitions:

- Illicit Discharge refers to any discharge, whether direct or indirect, that is not related to stormwater, and is not exempted by the City. This can include instances such as connecting a home's sanitary wastewater piping directly to the storm sewer, disposing of prohibited materials like used motor oil in a storm drain catch basin, or a failing septic system that is causing leakage or surface discharge into the storm sewer through a cracked line.
- Illicit Connection refers to any type of drain or conduit, either above or below ground level, that enables illegal discharge to enter the storm drain system. This includes any conduit that permits the entry of non-stormwater discharge, such as sewage, process wastewater, and wastewater, into the storm drain system. Additionally, it encompasses any connections from indoor drains and sinks to the storm drain system, regardless of whether the drain or

connection was previously authorized or approved by an authorized enforcement agency. Furthermore, it encompasses any drain or conduit from a commercial or industrial land use that is connected to the storm drain system, but which has not been appropriately documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

- Municipal Separate Storm Sewer System (MS4) refers to the inlets, pipes, and open channels that transport stormwater runoff located within the present corporate boundaries of the City of Smithville.
- Stormwater is the water that originates from precipitation and does not get absorbed into the soil, evaporated into the atmosphere, or collected by ground surface depressions and vegetation. It instead flows over the surface of the ground.
- Exempt Non-stormwater Discharges include activities such as water line flushing, landscape irrigation or lawn watering, diverted stream flows, rising groundwater, ground water infiltration into storm drains, uncontaminated pumped ground water, foundation or footing drains (excluding active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wetland flows, dechlorinated swimming pools (typically with less than one PPM chlorine), fire fighting activities, and any other water source that does not contain pollutants.

Moreover, discharges that the authorized enforcement agency specifies in writing as necessary to protect public health and safety are also exempt. Dye testing is also an allowable discharge but requires verbal notification to the authorized enforcement agency prior to the test. Additionally, any non-stormwater discharge allowed under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered by the Federal Environmental Protection Agency is exempt, provided that the discharger is fully compliant with all permits, waiver, or order requirements and other relevant laws and regulations, and written approval has been granted for any discharge into the storm drain system.

II. Characteristics and Classification of Illicit Discharges in MS4 Systems

Illicit discharges may vary in their characteristics depending on their frequency, type, mode of entry into the MS4, and the nature of the source.

Continuous discharges are more easily detected, while intermittent discharges are more challenging to identify.

Transitory discharges are typically in response to a one-time event, such as an accidental spill, and are also difficult to detect through routine screening. Public and employee notification is often the best way to uncover transitory discharges.

Dry weather discharges may contain various types of flows, including sewage, wastewater, liquid waste (such as oil and paint), tap water, landscaping irrigation, groundwater, and spring water. Water quality testing can help distinguish illicit flow types (sewage/septage, wastewater, and liquid wastes) from cleaner discharges (tap water, landscaping irrigation, and groundwater).

Illicit discharges can also be categorized based on their mode of entry into the MS4 as either direct or indirect:

Direct entry means that the discharge is connected directly to the storm drain pipe through a sewage pipe, shop drain, or other type of pipe.

Indirect entry occurs when flows generated outside the storm drain system enter through storm drain inlets or infiltrate through the joints of the pipe. Many indirect discharges can be identified and prevented using the concept of "generating sites," which are sites where common operations can generate indirect discharges in a community.

Sites Classification

Land use is often used to classify sites, and non-stormwater discharge sources can be categorized based on the type of "generating site." The following are examples of the most common sources of non-stormwater discharges for each generating site type:

- **Residential sites:** oil dumping, car washing, irrigation overflows, failing on-site sewage treatment systems, and swimming pool discharges.
- **Institutional sites** (such as hospitals, schools, and large corporate campuses): routine grounds maintenance, fleet maintenance, parking lot cleaning, loading/unloading areas, and outdoor storage areas.
- **Commercial sites:** disposal of food wastes, sewage from campgrounds and marinas, parking lot power washing, outdoor washing, poor dumpster management, and car fueling/repair/washing.
- **Industrial sites:** ruptured pipes, spills and leaks, disposal of rinse water, process water, wash water and contaminated non-contact cooling water, and leaking tanks.

- **Municipal sites:** street and storm drain maintenance, fleet washing, operations that handle solid waste, water, wastewater, spills, accidents, dumping, and yard waste disposal.

III. Detection of Illicit Discharges

The identification of unlawful discharges and connections in the City of Smithville will be achieved using three primary methods: reporting by the community, reports from employees, and identification during periodic inspection of dry weather conditions. Below are further explanations of each detection method.

1. Illicit discharge reported by the community:

The City of Smithville's stormwater management program prioritizes public education within the City through various means such as a bi-monthly newsletter and its official website. One of the efforts to promote awareness is the installation of "No Dumping" signs in many city storm inlets, with the goal of having these signs in all inlets. Moreover, the City's website has a dedicated "Report a Concern" section for stormwater issues. The City expects more reports of illicit discharges as the public becomes more knowledgeable about the issue.

When a resident dials the phone number given on the website, they will be directed to the Public Works Department. The staff member who answers the call will document the information on an illicit discharge investigation form. (Appendix A):

- The date and time of the call
- The caller's name and contact details (unless they prefer to remain anonymous)
- The discharge's location and characteristics
- The discharge's origin (if known by the caller)
- Any other relevant information.

In case the discharge poses an immediate danger to the environment or public safety, the staff member will inform Emergency Dispatch at 816-858-3521, the police and fire departments, and the Street Superintendent at 816-532-2080 in the Public Works department to take necessary actions as soon as possible. The Public Works Director will also be notified for further investigation and enforcement. For non-emergency discharges, the staff member will notify the Public Works Department at 816-532-3897 for an investigation.

2. Illicit discharge reported by employees:

The City has implemented employee education efforts as part of its stormwater management program. Standard Operating Procedures (SOPs) have been developed to prevent illicit discharges from municipal operations by providing guidance on activities where they could occur due to mishandling of materials, spills, or accidents. During their routine duties, City employees may

come across evidence of illicit discharges and connections. To address this issue, the City has established a procedure within the Illicit Discharge Detection and Elimination SOP, which includes the following steps:

Procedures to follow if illicit discharge is detected:

- Call supervisor.
- Follow the path upstream to identify the origin of the discharge.

• **Tracing Procedures**

1. Using the stormwater system map available in the GIS, examine the structure upstream of the outfall to see if the discharge is in the last enclosed segment.
2. Keep moving upstream until the point where the discharge enters the system is isolated.
3. While tracing the system, be on the lookout for potential sources of the discharge, such as ongoing construction or remodeling work, running sprinkler systems (or those that have recently run), and the location of sanitary sewers in the vicinity. If the source can be identified, document it on the screening form. If it is anything other than sprinkler water or air conditioning condensate, appropriate enforcement actions must be taken depending on the type of source.
4. If the discharge seems to be either potable water or wastewater, contact the Utilities Department Maintenance Supervisor to assist with the investigation to determine if there is a sewage leak or if it is a possible potable water leak. CCTV inspection of sanitary and storm sewer lines may be used. Confined space entry should only be performed by trained personnel, and only when necessary.

After the source of an illicit discharge or connection has been identified and confirmed, the appropriate enforcement procedures outlined below must be initiated to eliminate the source.

Enforcement Procedures to eliminate the source

For discharges that are flowing, trace the flow visually or using dye testing.

For non-flowing discharges, inspect the access points to storm drains for evidence of staining or residual effects, or perform dye testing.

- Take photos of the discharge.
- If directed, gather samples or estimate the flow.
- Complete Outfall Inspection Form to document observations
- Document any additional actions taken.

If a supervisor receives a call from one of their team members, they must fill out an Illicit Discharge Investigation Form. (Appendix A):

- The date and time of the call
- The caller's name and contact details (unless they prefer to remain anonymous)
- The discharge's location and characteristics

- The discharge's origin (if known by the caller)
- Any other relevant information.

In case the discharge poses an immediate danger to the environment or public safety, the staff member will inform Emergency Dispatch at 816-858-3521, the police and fire departments, and the Street Superintendent at 816-532-2080 in the Public Works department to take necessary actions as soon as possible. The Public Works Director will also be notified for further investigation and enforcement. For non-emergency discharges, the staff member will notify the Public Works Department at 816-532-3897 for an investigation.

3. Illicit discharge found through routine dry weather field screening:

The program for screening the MS4's outfalls during dry weather is conducted by the City to detect any indication of illegal discharges or leaks. Each of the screening locations will be inspected at least once per permit cycle, subject to the availability of time and staff resources. During these inspections, the dry weather field screening form (Appendix E) will be used to carry out visual inspections, and photographs will be taken, which will be stored in both electronic and hard copy form in the Engineering Division. If any signs of illicit discharges or connections are identified during the inspection, the inspector will notify the Public Works Director to collect a sample with field parameters gathered as needed (such as temperature, pH, color, odor, clarity). The inspector will then contact the Public Works Director to report the screening location for further investigation.

IV. Investigation Procedure

When notified through one of the detection methods mentioned above, the Public Works Director or their delegate will investigate potential unauthorized discharges and connections. The investigation will begin at the reported location, and if the location is not the source, the investigator will trace the discharge through the storm sewer system upstream until the source is found. Additionally, the investigator will follow the evidence downstream until it is no longer visible to determine the extent of the damage caused by the discharge. To identify the affected areas of the MS4, the investigator will use the City's GIS map of the storm sewer system. If necessary, the investigator may employ closed circuit television inspection equipment, similar to that used for sanitary sewer inspections, to track the origin of the discharge.

Upon conducting the investigation, the investigator will complete an illicit discharge investigation form (Appendix B1), an illicit discharge checklist (Appendix B2), and gather photographic evidence.

Samples may also be collected. A chain of custody form (Appendix G) will accompany any samples taken as part of an investigation.

When the individual responsible for the discharge is evident (for instance, if an illicit connection can be followed to a building or if construction waste was dumped near a construction site), the investigator will report the offender to the Public Works Director for enforcement measures, if

deemed necessary. If the perpetrator's identity is uncertain, the investigator will inform the Public Works Director to coordinate with the Street Superintendent to contain and clear up the illicit discharge, particularly in cases of dumping.

V. Elimination

The City of Smithville has ordinances in place to prohibit illicit discharges. Specifically, Section 520.110 prohibits any discharge to the MS4 or any watercourse of anything other than stormwater, with a few exceptions. These exceptions include discharges from water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one PPM chlorine), fire fighting activities, and any other water source not containing pollutants.

The ordinance also allows for discharges specified in writing by the authorized enforcement agency if they are necessary to protect public health and safety or for dye testing. The prohibition on discharges does not apply to non-storm water discharges permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency. However, the discharger must be in full compliance with all requirements of the permit, waiver, or order, and other applicable laws and regulations, and must obtain written approval for any discharge into the storm drain system.

Emergencies

An emergency illicit discharge can be defined as one that poses an immediate threat to human health and safety or imminent harm to the environment. Primarily these will be spills or accidents where the release of a liquid that must be contained. Depending on the volume and nature of the spilled liquid, the actions that must be taken by the City of Smithville Fire Department and Public Works Department will vary.

The containment of any hazardous materials, which are defined as solids, liquids, or gases that can cause harm to people, living organisms, property, or the environment, will be the responsibility of the fire district as outlined in their Hazardous Materials Response and Hazardous Materials Initial Incident Response (refer to Appendix C). This encompasses a range of dangerous goods, including those that are radioactive, flammable, explosive, corrosive, oxidizing, asphyxiating, biohazardous, toxic, pathogenic, or allergenic, as well as physical conditions such as compressed gases and liquids or hot materials. It also includes any materials or chemicals that may possess other characteristics that make them hazardous in certain situations.

For spills of non-hazardous materials that are under 55 gallons, either Fire Department or Public Works personnel can contain them. They can deploy absorbent booms to prevent the

material from discharging into the storm sewer. Spills exceeding this quantity will be contained by the Fire Department with assistance from the Public Works Department.

After the spill or accident has been contained, the Public Works Director or their representative will document the situation and notify the responsible party (if identifiable) of their cleanup responsibilities, including any necessary reporting to the Missouri Department of Natural Resources (MDNR).

If the responsible party cannot be easily identified, the Public Works Director will arrange for a safe cleanup of the unauthorized discharge through a cleanup contractor such as Clean Harbors Environmental Services or a similar company. The Public Works Director will keep a record of the cleanup expenses in case the responsible party is identified at a later time. If necessary, the Public Works Director will also inform the MDNR.

Non-emergencies

Non-emergency illicit discharges typically refer to contained spills or accidents, or periodic discharges that are not currently active. The sources of periodic discharges can often be traced back to their origin.

Difficulties may arise in identifying the party responsible for transitory discharges, also known as dumping. If the responsible party cannot be easily identified, the Public Works Director will arrange for a safe cleanup of the discharge with a contractor such as Clean Harbors. The costs of the cleanup will be documented by the Public Works Director in case the responsible party is identified in the future. Additionally, if necessary, the MDNR will be notified by the Public Works Director.

Disconnection from system

Discovery of illicit connections is typically achieved through tracing a continuous discharge using visual inspection or Closed Circuit Television (CCTV) equipment, which allows for tracking up through the system. The source of the connection is typically identified during this process. If required, dye testing can be used to further confirm the relationship between the source and the connection.

The individual responsible for the discharge is determined to be the owner of the property where the discharge originates from.

The tracing procedures employed by the inspector, such as CCTV footage, photographs, and a written account of the process, will be recorded and submitted to the Public Works Director. These records will be retained in case they are required for a court proceeding. Additionally, a chain of custody form will be completed for any samples collected during the inspection.

After the inspection, the Public Works Director will provide written notification to the responsible party regarding the discharge, including a specified timeline for the removal of

the illicit connection. An example of the notification letter can be found in Appendix F.

If the responsible party is unable to meet the specified timeline, the Public Works Director may grant an extension of up to 90 days. However, if the responsible party refuses to comply with the removal of the illicit connection, the Public Works Director will declare it a nuisance and follow the abatement procedures outlined in Chapter 215 of the Municipal Code.

VI. Follow-up Procedures

Each year, the Public Works Director or their appointed representative will review the IDDE files to confirm that all investigations have been appropriately concluded. This review will encompass all relevant documents, including those from the initial notification through the investigation and the completion of any necessary connection removal or cleanup. In instances where investigations are still open, the files will be evaluated to determine whether further enforcement action is required. Contact information will be reviewed every year to ensure it is updated and accurate.

VII. Appendices

Appendix A – Illicit Discharge Reporting Form

Appendix B1 – Illicit Discharge Investigation Form

Appendix B2 - Illicit Discharge Checklist

Appendix C – Hazardous Materials Initial Incident Response (Smithville Fire District)

Appendix D - Hazardous Materials Response (Smithville Fire District)

Appendix E – Dry Weather Field Screening Investigation Form

Appendix F – Sample Notification Letter

Appendix G – Chain of Custody Form



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ILLICIT DISCHARGE REPORTING FORM

Date:

Time:

CALLER/ REPORTING INFORMATION

Name

Phone:

Address:

Brief Summary:

Name of Person Taking Call/ Report:

ILLICIT DISCHARGE INFORMATION

When was the discharge seen?

Date:

Time:

Location (Nearest Intersection / Landmark / Directions):

Discharge:

is the material in the storm drain?

Yes / no

is the material just on the highway?

Yes / no

is the substance a known hazardous material?

Yes / no

is the substance a known non-hazardous material?

Yes / no

is the substance unknown and cannot be identified?

Yes / no

Description of Substance:



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ILLICIT DISCHARGE INVESTIGATION FORM

Name(s) of City Inspector(s):	
Date/ Time of site visit:	
In Storm Sewers: <input type="checkbox"/> No <input type="checkbox"/> Yes, discharges to:	
Reported to MDNR? <input type="checkbox"/> No <input type="checkbox"/> Yes	If yes, when?
Name of chemical /waste stream / material:	Quantity released:
Other agencies at site?	
<input type="checkbox"/> MDNR <input type="checkbox"/> SFD <input type="checkbox"/> SPD <input type="checkbox"/> SPWD <input type="checkbox"/> MODOT <input type="checkbox"/> MSHP <input type="checkbox"/> MDC <input type="checkbox"/> Other (please specify):	
Description of Incident <i>(Include release location and cause)</i>	
Name of Responsible Party: RP's Address Phone #:	
Environmental Services Firm at site: <input type="checkbox"/> No <input type="checkbox"/> Yes, firm name	
Notifications: <input type="checkbox"/> MDNR <input type="checkbox"/> MDC <input type="checkbox"/> Other: _____	
DEFINITIONS AND PHONE NUMBERS	
MDNR = Missouri Department of Natural Resources (24-Hr Environmental Emergency Response Line) 1-573-634-2436 SFD = Smithville Area Fire Protection District Dispatch 816-532-4902 SPD = Smithville Police Department Dispatch 816-858-3521 SPWD = Smithville Public Works (Street Maintenance) 816-532-2080 MSHP = Missouri State Highway Patrol 816-622-0800 MODOT = Missouri Department of Transportation 816-622-6500 MDC = Missouri Department of Conservation 816-655-6250	
ENVIRONMENTAL CLEAN-UP COMPANIES	
ACE Pipe Cleaning 816-241-2891 Clean Harbors Environmental Services 816-781-3000 Heritage Environmental Services 816-453-4321	

ILLCIT DISCHARGE CHECKLIST (FOR SW FAILURE) - NON-ROUTINE

In the event of a stormwater management plan failure, the City must notify the owner on permit in writing & phone. The Inspector must complete this report & Comprehensive Inspection Checklist for Construction

Date:

Inspector:

WEATHER CONDITIONS				
What are the weather conditions?				
Last Rain Event?		Amount of Rain?		
If wet weather, is stormwater runoff leaving site?		Is the runoff discolored, odiferous, or oily?		
What could be the source of the discoloration, odor or sheen?				
ITEM	SITE SPECIFIC INFORMATION			
1	Site Description:			
	Facility:			
	Roadway:			
	Ditch:			
	Culvert:			
	Catch basin:			
	Storm Sewers:			
2	Circle General Condition of site and describe. Describe:	POOR	FAIR	GOOD EXCELLENT
3	Describe the type of outfall (pipe, natural discharge point, foundation drain, etc). What condition is it in?			
4	Is an observable non-stormwater discharge noted?			
5	Are there reasons for suspicions of source (clues: discolored water, fungus, oily, motor fluids, grass clippings and leaf litter, animal waste, septic tank, sewer lines failing, exposed fill nearby, past landfill, pump site, industrial source nearby, black water source, gray water source, etc.)?			
6	Describe Non-stormwater discharge.			
	a) Odor ____ YES ____ NO Description:			
	b) Color ____ YES ____ NO Description:			
	c) Sheen ____ YES ____ NO Description:			
	d) Stressed flora ____ YES ____ NO Description:			
	e) Stressed fauna ____ YES ____ NO Description:			
	f) Visible discharge ____ YES ____ NO Description:			
7	Describe the location of discharge and depict on map.			
8	Describe the source of discharge			
9	Describe the corrective actions recommended			

10	Was the owner notified of corrective actions needed? How?
11	Other Observations or comments
12	Reviewed by
13	Reported to
SKETCH MAP	

Hazardous Materials Initial Incident Response

502.1 PURPOSE AND SCOPE

This document provides on-scene procedures for Smithville Area Fire Protection District units operating at incidents involving hazardous materials.

Corresponding Policies:

Hazardous Materials Response
Hazardous Materials Training
Incident Management

502.2 DEFINITIONS

Hazardous Materials Operational Zones:

Exclusion zone (hot zone) - The area with actual or potential contamination and the highest potential for exposure to hazardous substances.

Contamination reduction zone (warm zone) - The transition area between the exclusion and support zones. This area is where responders enter and exit the exclusion zone and where decontamination activities should take place.

Support zone (cold zone) - The area that is free from contamination that should be safely used as a planning and staging area.

502.3 FIRST FIVE MINUTES

Whenever practicable, the first arriving Smithville Area Fire Protection District unit should approach the scene from upwind and uphill and stage at a location estimated to be in the cold zone. Contact the Communications Center and provide the following information:

- Unit on-scene
- Initial scene size-up
- Primary (Level 1) staging location, which should be in the cold zone
- Unit assuming incident command (IC)

The IC should:

#Attempt to identify the hazardous material(s) involved in the incident through:

- Any available location pre-plan
- Material Safety Data Sheets
- Information from site representatives or vehicle operator
- Visible placards or signs
- The shape of tanks or other holding areas

Smithville Area Fire Protection District

Fire Procedure Manual

Hazardous Materials Initial Incident Response

- Reference to Emergency Response Guidebook that should be on all apparatus

#Perform or direct another member to perform a 360 assessment and report the results to the IC. Whenever available, personnel should use air monitors, such as four-gas monitors, to assist in determining levels of contamination. For hazardous materials response, the 360 assessment report should include, but not be limited to:

- Any leaking of liquids
- Any venting of gases or vapors
- Identification of the hazardous material
- Possible victims

#Contact the Communications Center and request additional resources necessary to contain and isolate the hazardous material, including any specialized resources such as hazardous materials response units available to the district from neighboring jurisdictions and county, state or federal agencies.

#Begin developing the initial incident action plan (IAP), taking into consideration:

- Incident name, agency or unified command and command post location.
- Information for responding units on the best route of travel, staging locations and minimum isolation distances to maintain the safety of responding members.
- The information available on the products involved or an indication that the products are not yet known.
- The incident control objectives and goals, including confinement and containment measures.
- An incident site safety plan and designation of an Incident Safety Officer.
- A communications plan, including radio frequencies and contact telephone numbers

502.4 PROCEDURES

502.4.1 RESOURCE DEPLOYMENT

(a) Apparatus

1. Apparatus should be positioned in the cold zone and, whenever practicable, upwind, uphill and upstream of any vapor cloud or spill.

(b) Personnel

1. Personnel should be wearing PPE appropriate for the hazard.
2. Personnel should engage only in operations in relation to their level of training and only when wearing PPE appropriate to the level of the incident.

Smithville Area Fire Protection District

Fire Procedure Manual

Hazardous Materials Initial Incident Response

502.4.2 OPERATIONS

- (a) The primary objectives of a hazardous materials response include, but may not be limited to:
 - 1. Isolating, confining and containing the hazardous material.
 - 2. Evacuating the contaminated area.
 - 3. Denying entry to the contaminated area.
- (b) Personnel should assume that any unknown or unidentified substance is a hazardous material until confirmed otherwise.
- (c) As soon as it is practicable, the IC should confirm operational hot, warm and cold zones and relocate staging locations, the command post and personnel accordingly.
- (d) When available, personnel should use air monitors, such as four-gas monitors, to continually read the scene contamination levels.
- (e) Whenever practicable, the IC should have at least one advance life support ambulance on-scene and available for treatment and transport before personnel enter the hot zone.
- (f) The IC should evaluate responding personnel's level of training in relation to the hazard. Hazardous materials mitigation activities should not exceed the level of training and PPE required to contain and/or mitigate the hazard.
- (g) The IC should determine the hazard Level of the incident as soon as possible to aid in developing the IAP, determining operations and additional required resources, and performing a risk vs. benefit analysis for any rescue, fire suppression or mitigation and containment activities. Hazard levels are:
 - 1. Level I - These incidents are relatively small and can usually be handled using defensive actions by initial responding personnel wearing structural firefighting PPE. These incidents have no environmental impact and pose little threat to the public. Examples of Level I incidents include, but are not limited to:
 - Fuel spills of less than 20 gallons that have not entered or threatened to enter storm drains or waterways that can be contained by use of dikes, diversion and collection.
 - Natural gas or propane leak at a single-family residence with no explosion, fire or injuries that can be mitigated by shutting off the gas supply and venting the residence or through use of controlled tank venting or plugs.
 - Requests for investigation of an unknown odor that finds no hazardous materials present.
 - Carbon monoxide calls.
 - 2. Level II - These incidents should be considered as more complex than Level I incidents and may require offensive or defensive actions and evacuation. These incidents can pose a significant threat to the environment and public health and may require trained HAZMAT teams with specialized equipment and PPE. Examples of Level II incidents include, but are not limited to:

Smithville Area Fire Protection District

Fire Procedure Manual

Hazardous Materials Initial Incident Response

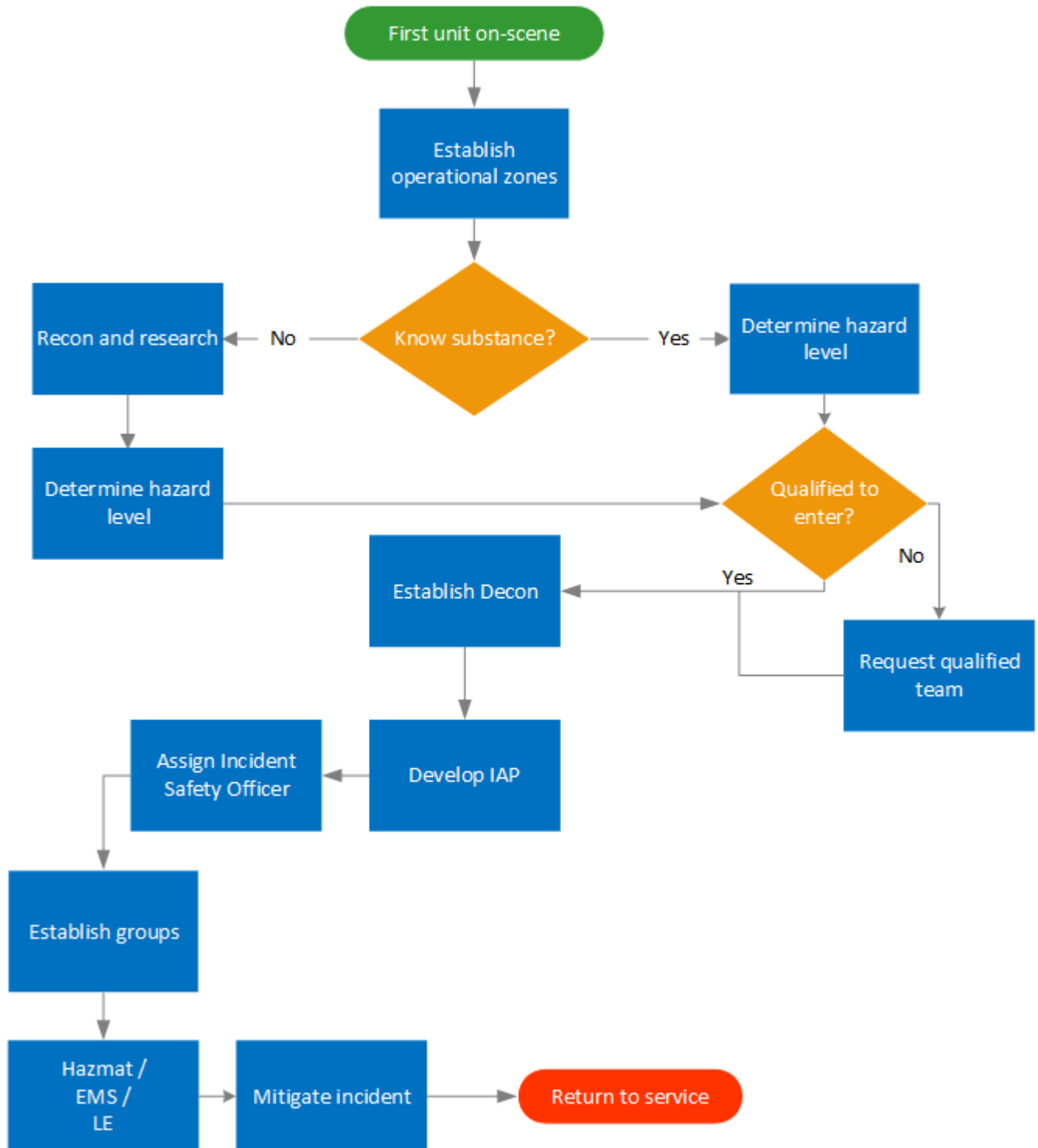
- Fuel spills or leaks of more than 20 gallons entering or threatening to enter storm drains or waterways. These incidents may require immediate containment measures and monitoring the spread of the hazard to determine downstream contamination or hazards.
 - A release of hazardous materials with the potential for explosion.
 - Any natural gas or propane leak from a vehicle-mounted propane delivery tank or in a building larger than a single-family residence.
 - Any incident where the hazard is not identified.
 - Leaks from outside natural gas lines.
3. Level III - These incidents are extremely complex and pose an extreme and immediate threat to the environment and/or public health. These incidents generally exceed the capabilities of local, regional and state resources, and often require widespread evacuation. Examples of Level III incidents include, but are not limited to:
- Structure fires involving hazardous material production, processing or storage facilities.
 - Train derailment involving the release of one or more hazardous materials.
 - Terror attack involving hazardous materials.

502.5 PROCEDURE DECISION TREE

Smithville Area Fire Protection District

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Hazardous Materials Initial Incident Response



Hazardous Materials Response

319.1 PURPOSE AND SCOPE

Hazardous materials (HAZMAT) may include toxic, flammable, corrosive, explosive, radioactive, or reactive materials; materials that can cause health hazards; or a combination of these materials. The purpose of this policy is to provide a general framework for handling a HAZMAT incident.

Training related to HAZMAT response is addressed in the Hazardous Materials Training Policy.

319.2 POLICY

It is the policy of the Smithville Area Fire Protection District to protect the safety of the public and responders to HAZMAT incidents and to comply with all applicable state and federal laws during the management and mitigation of all HAZMAT incidents (29 CFR 1910.120).

319.3 RESPONSIBILITIES

All HAZMAT responses should be managed using the National Incident Management System (NIMS) and the Incident Command System (ICS) in accordance with procedures of the Missouri Emergency Response Commission (MERC) and the Missouri Department of Public Safety's State Emergency Management Agency (SEMA) for emergency response and applicable federal laws.

319.3.1 INITIAL ACTIONS

If available, information should be provided by the Communications Center to the units responding to a HAZMAT incident including the name and type of the material involved (e.g., hydrochloric acid, corrosive), the size and quantity of the containers involved, the nature of the problem (e.g., spill, leak), and any known dangerous properties of the materials.

The first-arriving unit approaching the incident should use caution, approach from upwind and upgrade of the incident, establish Incident Command, and begin a size-up of the situation. The purpose of the size-up by the first-in company is to determine the nature and severity of the HAZMAT incident and formulate an initial Incident Action Plan (IAP). While it may be necessary to take immediate action to make a rescue or evacuate an area, any action should be taken with an awareness of the risk to district personnel and making appropriate use of available protective equipment. It is important to avoid the premature commitment of personnel to potentially hazardous locations. In some cases, isolating the incident and denying entry until more resources arrive may be the safest approach.

In assessing the incident, all available references should be used to determine the hazards that are or potentially could be present. These references may include but are not limited to the U.S. Department of Transportation (DOT) Emergency Response Guidebook, the National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards, Safety Data Sheets (SDS), HAZMAT business plans, manifests, or bills of lading, National Fire Protection Association (NFPA) placards, U.S. DOT placards, and United Nations substance identification numbers. Other

Hazardous Materials Response

sources of information may be available, such as the Chemical Transportation Emergency Center (CHEMTREC®), facility personnel, district specialists, or manufacturers of the materials involved.

The hazards presented by a HAZMAT incident may change significantly as the materials interact with other materials, the surrounding environment, and the actions taken by responders. Responders should consider site topography, surroundings, other potential hazards, and prevailing weather conditions. The initial perimeter established for the incident may need to be expanded to establish the appropriate control zones for the response (e.g., exclusion zone, contamination reduction zone, support zone).

319.4 INCIDENT ACTION PLAN

The primary goal of the IAP will be to protect the safety of the public and responders. The initial IAP should focus on identifying a safe approach for other arriving units, determining the type of hazard and the scope of the incident, isolating the area and denying entry to the public, determining incident-specific personal protective equipment (PPE), and initiating notifications. The initial IAP may be a written document or may be notes kept and controlled by the Incident Commander (IC). The initial IAP should include the following minimum information:

- (a) Incident name, agency or unified command, and command post location.
- (b) Information for responding units on the best route of travel, staging locations, and minimum isolation distances to maintain the safety of responding members.
- (c) The information available on the products involved or an indication that the products are not yet known.
- (d) The incident control objectives and goals.
- (e) An incident site safety plan and designation of an Incident Safety Officer.
- (f) A communications plan including radio frequencies and contact telephone numbers.

When a HAZMAT incident response will be prolonged and will extend beyond an initial operational period, a written IAP should be developed. The written IAP should utilize standard NIMS/ICS forms that may include but are not limited to:

- ICS-201 Incident Briefing.
- ICS-202 Incident Objectives.
- ICS-203 Organization Assignment List.
- ICS-204 Assignment List.
- ICS-205 Incident Radio Communications Plan.
- ICS-206 Medical Plan.
- ICS-207 Incident Organization Chart.
- ICS-208 Safety Message/Plan.

Hazardous Materials Response

319.5 RESOURCE CONSIDERATIONS

Most HAZMAT incidents will require the IC to request additional resources in order to implement the IAP and safely mitigate the hazard.

The response to a HAZMAT incident may require numerous resources to achieve incident stabilization and return to normal operations. The IC should consider involving:

- (a) Specialized HAZMAT teams at the technician and/or specialist levels for assistance with mitigating the release of material. Teams may be operated by local or regional fire agencies, military or private industry.
- (b) Specialized operators or contractors to address post-response mitigation, removal, cleanup, and required disposal of material.
- (c) Local law enforcement for assistance with scene security and evacuation, if necessary.
- (d) Activation of local or regional Missouri HAZMAT emergency response teams for assistance.
- (e) United States Coast Guard assistance for spills affecting waterways.
- (f) Public works and road departments for diking, diversion, or other activities.

Resources shall be coordinated using NIMS/ICS as the response is reinforced. It is important that duties assigned to personnel are suitable for their level of training under federal regulations (29 CFR 1910.120). It is also important to consider the limitations of available personal protective equipment (PPE) and the limitations of chemical detection or monitoring equipment on hand when preparing to commit personnel to a potentially hazardous area.

319.6 NOTIFICATIONS

Managing the response to a HAZMAT incident may involve required notifications to various local, regional, state or federal agencies. ICs should consider notifying the following agencies when applicable or required:

- (a) The public, media and other affected entities, such as schools and businesses
- (b) Adjoining jurisdictions that may be impacted by incident activities
- (c) Local and regional elected officials and emergency management personnel
- (d) The Missouri Department of Natural Resources (MDNR) and the emergency coordinator for the Local Emergency Planning Committee (LEPC)
- (e) The Missouri Department of Health and Senior Services
- (f) Missouri Department of Transportation
- (g) United States Environmental Protection Agency National Response Center

**Dry Weather Outfall Screening Form**

Name of City or County:	Data Sheet Number:
Date of screening (MM/DD/YY):	Time of screening:
Weather conditions:	
Sampling performed by:	

Outfall Description

Outfall Location:	Outfall I.D. Number/ Name:
Outfall Type/Material: <input type="checkbox"/> Closed Pipe (check): <input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Other: _____ <input type="checkbox"/> Open Channel (check): <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Grassy <input type="checkbox"/> Other: _____	Outfall Diameter/Dimensions:
Receiving stream and watershed name:	
Land use/industries in drainage area:	
GPS Coordinates:	Photo numbers:

Field Observations and Measurements

Flow from outfall? <input type="checkbox"/> Yes <input type="checkbox"/> No	Flow Description: <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial
Odor: <input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide (rotten eggs) <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Other _____	
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Faint <input type="checkbox"/> 2-Easily Detected <input type="checkbox"/> 3-Noticable from a distance	
Color: <input type="checkbox"/> Clear <input type="checkbox"/> White <input type="checkbox"/> Gray <input type="checkbox"/> Orange/Rust <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Brown/Black <input type="checkbox"/> Other _____	
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Faint <input type="checkbox"/> 2-Clearly visible in bottle <input type="checkbox"/> 3-Clearly visible in flow	
Turbidity: <input type="checkbox"/> None <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque <input type="checkbox"/> Silty <input type="checkbox"/> Muddy <input type="checkbox"/> Other	
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> Slight cloudiness <input type="checkbox"/> 2-Cloudy <input type="checkbox"/> 3-Opaque	
Floatables: <input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other _____	
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Few/slight <input type="checkbox"/> 2-Some <input type="checkbox"/> 3-Heavy	

Outfall Potential for Illicit Discharge:

- ☐ Unlikely - or- No Flow ☐ Possible (presence of two or more indicators)
☐ Suspect (one or more indicators with severity of 2 or 3) ☐ Obvious - or- Confirmed



107 W. Main St • Smithville, MO 64089

P: (816) 532-3897

[Resident / Business]

[Address]

[City, State Zip]

Re: Illicit Discharge or

Dear [Resident / Business]:

City staff have conducted an inquiry and found evidence of an unlawful discharge that violates Section 520.110 of the City Ordinance. This section prohibits the release of any substance other than stormwater into the municipal separate storm sewer system (MS4) or any watercourse as per the City of Smithville Municipal Code.

The location and description of the illicit on your property in violation of the City Code is described as follows:

[LOCATION AND DESCRIPTION OF DISCHARGE]

You have been given notice to rectify this violation and inform the Public Works Director in writing of the corrective measures within a 24-hour timeframe. In the event of non-compliance, the Public Works Director will consider the illicit discharge as a nuisance and follow the procedures for eliminating nuisances as stipulated in Section 215.010 of the Municipal Code.

If you have any questions, you may contact me at 816-532-3897.

Sincerely,

Name
Title
City of Smithville



107 W. Main St • Smithville, MO 64089

P: (816) 532-3897

Chain of Custody Form

Date		
Sample ID		
Site Name		
Location		
Time Sample was Collected		
Time Sample was received in Lab		
Sample Type		
Container Type	() Glass () Plastic	() Glass () Plastic
Sampler:		
Delivered by		
Lab Name:		
Received by		
Test requested:		
Comments:		

Laboratories Information

KC Water

2 NE 32nd Ave
 KCMO 64116
 Lien Nguyen - Environmental Officer
lien.nguyen@kcmo.org
 Phone: 816-513-7006
 Main: 816-513-7000

Pace Analytical

9608 Loiret Blvd
 Lenexa, KS 66219
 John Stanton
john.stanton@pacelabs.com
 Phone: 913-599-5665
 Fax: 913-599-1759

Missouri Department of Natural Resources

Environmental Services Program
 PO Box 176
 Jefferson City, MO 65102-0176
 Eric Medlock
eric.medlock@dnr.mo.gov
 573-522-5028

American Water

1115 South Illinois Street
 Belleville, IL 62220-3102
 Cody Cruse - Technical Director
cody.cruse@amwater.com
 Phone: 618-222-4055
 Fax: 618-235-6349