

Dye Testing

1. Prior to performing this test, it is necessary to inform building owners and occupants in advance and gain permission for entry.
2. To perform the test, you need a crew of two or more people (ideally, all with two-way radios). One person is inside the building; the others are stationed at the appropriate storm sewer and sanitary sewer manholes (which should be opened) and/or outfalls. The inside person drops dye into a plumbing fixture (i.e., toilet or sink) and runs a sufficient amount of water to move the dye through the plumbing system. The inside person then radios to the outside crew that the dye has been dropped, and the outside crew watches for the dye in the storm sewer and sanitary sewer, recording the presence or absence of the dye.
3. Local public health and state water quality staff should also be notified.

Tracking Illegal Dumping

1. Report any illegal-dumping behavior (i.e., who illegally dumped and where illegal dumping occurred) to the Public Works Department.
2. Observe the materials that have been illegally dumped and trace the potential sources of the materials.
3. Note where dumping occurs most often, record patterns of time of day and day of the week, and note common responsible parties.

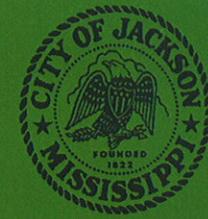
Observe!

Report!

Document!

C. Source Elimination

1. Provide the responsible party (home or business owners) with information about the illegal connections between their buildings and the storm sewer systems, its environmental consequences, the applicable regulations, and how to eliminate the illegal connection.
2. Send the property owner a Notice of Violation (NOV), which may require the violator to take steps such as monitoring, elimination of an illicit connection or discharge, or payment of a fine. Follow enforcement procedures stated in the Storm Water Quality Ordinance.
3. Municipal Separate Storm Sewer Systems (MS4's) and sanitary sewer systems should be inspected periodically and maintained properly to keep them in good repair.
4. Measures should be taken to clean up areas where illegal dumping has taken place, and controls such as signs or access restrictions should be used, as appropriate, to prevent further dumping.
5. Educate businesses, municipal employees, and the general public about the environmental and legal consequences of illegally disposing of waste into the storm sewer system.
6. Publicize waste-disposal options, such as used oil recycling and household hazardous waste collections.
7. Keep track of incident locations.



Chokwe Lumumba, Mayor

City of Jackson
Storm Water Management Program

Illicit Discharge Detection and Elimination



**Clean Water: It Depends on
All of Us !**

For More Information Contact
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Storm Water Management Program
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www.jacksonms.gov/government/publicworks/

What is An Illicit Discharge?

An illicit discharge is any discharge to an MS4 that is not composed entirely of storm water. Some exceptions are discharges from National Pollutant Discharge Elimination System (NPDES) - permitted industrial sources and discharges from fire-fighting activities.

What are Different Pollutants Involved?

Sediments, excess nutrient, debris, household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids. These are just a few common pollutants impacting water quality.

Why Should We Care?

Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants thereby significantly degrading receiving water quality and threatening aquatic, wildlife, and human health.

What are the Sources of Illicit Discharges?

Sanitary Wastewater, Effluent from Septic Tanks, Car Wash Wastewater, Radiator Flushing Disposal, Laundry Wastewater, Spills from Roadway Accidents, Improper Disposal of Auto and Household Toxics, Animal Waste, Illegal Dumping and Littering, and others.

A. Detection

Identifying Priority Areas

1. Commercial/Industrial Areas.
2. Older areas of the city.
3. Areas where there have been repeat complaints.
4. Locations identified from ambient water quality sampling data.

Dry-Weather Outfall and/or Manhole Surveys

1. Make visual observations of outfalls during dry weather to look for any non-storm water flows.
2. Sign up with a watershed association or other volunteer organization to help with outfall surveys or monitoring.
3. Notify the public that the survey will be taking place (e.g., send notices to property owners in the area).
4. Keep safety considerations at the forefront of the survey procedures at all times.
5. Observe dry weather flows for odor, color, turbidity, and floatable matter.
6. Observe outfalls for deposits and stains, vegetation, and damage to outfall structures.
7. Fill out inspection forms during any outfall surveys.
8. Consider taking digital photographs during inspections to document illicit discharge and dumping, problems identified, and progress in detecting and eliminating source.

Section 122-308 of the City of Jackson Storm Water Quality Protection Ordinance states the following as it relates to the contents included in the ordinance:

Section. 122-308. Violations and penalties

(b) Any person having control over an activity or any real property, or who causes, authorizes, facilitates, aids or abets any violation of any provision of this article, or who fails to abate any nuisance or prohibited practices for which the person is responsible, is guilty of a misdemeanor punishable by a fine not exceeding \$1,000.00 or imprisonment not exceeding 90 days, or both for each offense. Each day of violation shall be a separate offense.

B. Source Tracing

Manhole Observations

Consider the following steps to follow dry weather flows upstream along conveyance systems to bracket the location of the source:

1. Review the drainage system map.
2. Check the next "upstream" manhole with a junction to see if there is evidence of a discharge. You may wish to sample each manhole that has a discharge.
3. Repeat these steps until a junction is found with no evidence of a discharge. The discharge source is likely to be located between the junction with no evidence of discharge and the next downstream junction.
4. Be aware of the surrounding areas and look for water in gutters and streets.

Smoke Testing

1. Prior to performing this test, it is necessary to inform building owners and occupants in the area in advance.
2. This technique involves injecting non-toxic smoke into storm sewer lines and then noting the emergence of smoke from sanitary sewer vents in illegally connected buildings or from cracks and leaks in the storm sewer lines. The injection is accomplished by placing a smoke bomb in the storm sewer manhole below ground and forcing air after it. Smoke generating machines can also be used.
3. Test personnel should be stationed at points of suspected illegal connections or cracks/leaks, noting any escape of smoke.
4. It is also advisable to inform the police and fire departments.