

Report for City of Madisonville, KY

Illicit Discharge Detection and Elimination Plan



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In 2003, the United States Environmental Protection Agency (USEPA) initiated efforts to improve surface water quality by implementing the Phase II stormwater program. This program targets communities designated as “Urbanized Areas” that have Municipal Separate Storm Sewer Systems (MS4s) and residential populations of at least 50,000 with a population density equal to or greater than 1,000 persons per square mile. Additionally, the permitting authority can identify operators of a small MS4s outside of the Urbanized Area if the small MS4s is deemed to cause, or have the potential to cause, an adverse impact on water quality. This designation criteria applies to small MS4s serving a jurisdiction with a population of at least 10,000 and a population density of at least 1,000 people per square mile outside of the Urbanized Area. The Phase II stormwater program addresses six minimum control measures focusing on improving water quality in the community. These are:

1. Public Education and Outreach
2. Public Involvement and Participation.
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The City of Madisonville (City) is regulated as a Phase II community through the MS4 Phase II permit (Permit Number KYG200022) developed and adopted by Kentucky Division of Water (KDOW) through the Kentucky Pollutant Discharge Elimination System (KPDES) program. The latest version of the MS4 Phase II permit became effective on May 1, 2018 and is intended to be based on a 5-year permit term. The MS4 Phase II permit requires MS4 permittees to develop and implement a written Illicit Discharge Detection and Elimination (IDDE) plan and program to meet the requirements of that minimum control measure. Specifically, Section 2.2.3.3. of the permit states: “*The permittee shall develop and implement a written plan to address illicit discharges including illegal dumping.*” The City has previously initiated an illicit discharge program to meet prior regulatory permit requirements, including the adoption of an illicit discharge control ordinance (Madisonville Code of Ordinances, Chapter 53: Illicit Discharges and Connections) as well as initiated the development of system mapping and the dry weather screening of major outfalls within the MS4 area. The City’s current illicit discharge ordinance can be found in Appendix A.

STORM SYSTEM MAPPING

The City is currently developing a comprehensive mapping database of the existing storm infrastructure system, compiled in recent years from a combination of data gathering in the field and a review of available design and record drawings. The City currently manages its storm infrastructure data through ArcGIS applications. The City is working to update their ArcGIS database through field verification efforts and reviewing site and subdivision plans. As new information related to the storm infrastructure within the City is discovered it is entered into the database. The comprehensive mapping database provides the City with the foundation needed for an effective IDDE program centered around dry-weather screening of major outfalls. The storm sewer system mapping has been submitted by the City to KDOW as part of the Notice of Intent (NOI) submittal in response to the most recent MS4 Phase II permit.

The City recognizes that the definition of major outfall has been revised in the most recent MS4 Phase II permit (effective as of May 1, 2018). The permit requires the development of mapping to identify the location of all known major outfalls, which are now defined as follows:

“Major outfall means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage of 2 acres or more).”

The definition for major outfalls to include storm sewers that receive stormwater from lands zoned for industrial activity is a new permit requirement. As a result, the City plans to conduct an overlay of current land use data to identify those locations that are considered industrial. This effort is anticipated to result in identification of additional major outfalls during the current permit term. The City’s database of major outfalls will be updated and amended as necessary to include these new locations that are consistent with KDOW’s current definition of major outfalls.

To meet the permit requirement for a written plan to address illicit discharges, this IDDE Plan summarizes the City’s protocols and procedures for the following items as required by Section 2.2.3.3 of the permit:

- a. Locating priority areas.
- b. Implementing field assessment activities.
- c. Providing public reporting opportunities.
- d. Investigating complaints or reports related to illicit discharges.
- e. Developing timeframes for the investigation and removal of illicit discharges.
- f. Tracing the source of an illicit discharge.
- g. Removing the source of the illicit discharge.
- h. Adopting procedures for evaluation and assessment.

LOCATING PRIORITY AREAS

Section 2.2.3.3.a of the MS4 permit requires the following:

“Procedures for locating priority areas likely to have illicit discharges.”

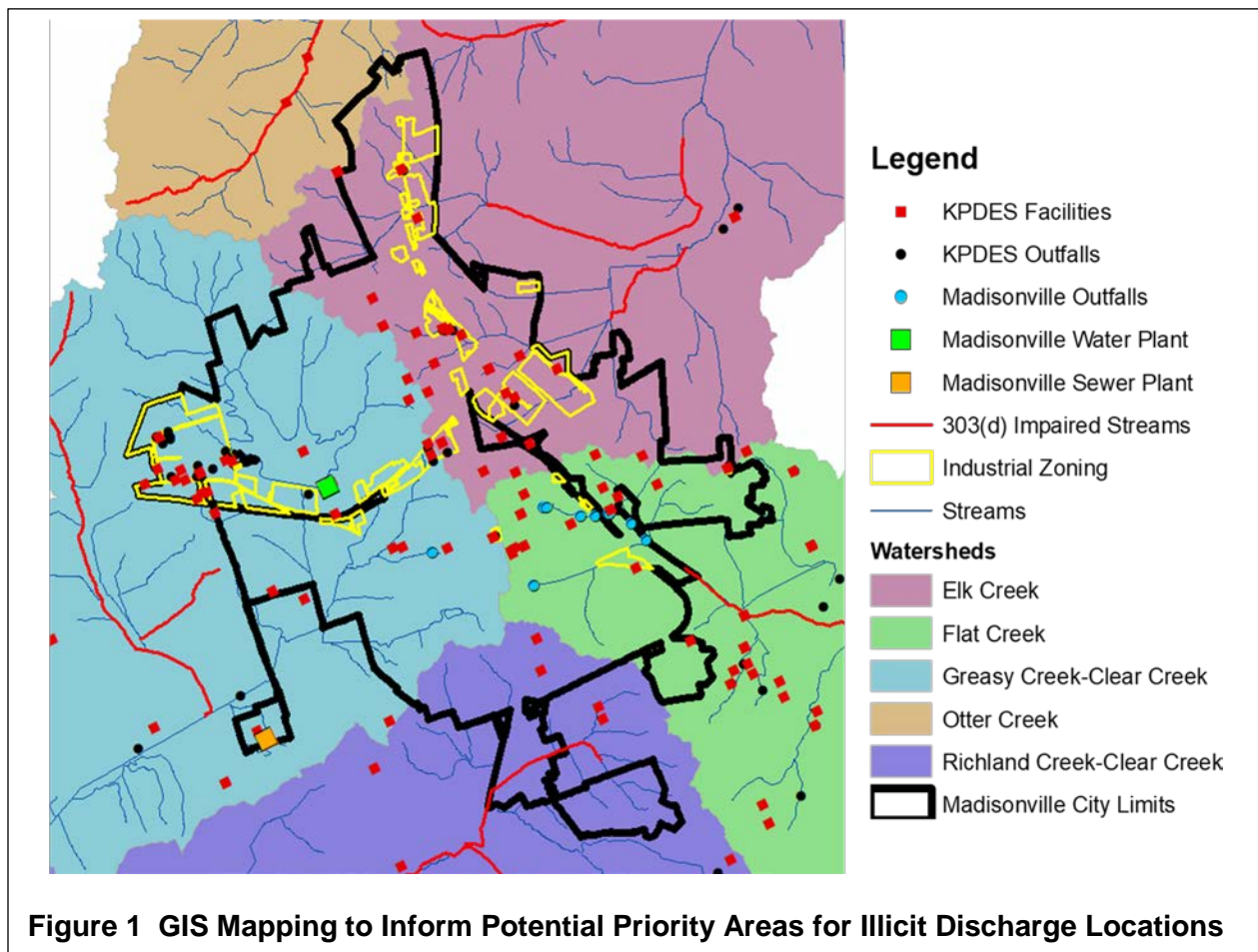
Priority areas can generally be considered as locations that have a higher probability of illicit discharges. The following list, taken from *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004), describes several screening factors that should be considered when determining potential priority areas for illicit discharges.

1. History of discharge complaints and reports.
2. Poor dry weather water quality.

3. Density of generating sites or industrial National Pollutant Discharge Elimination System (NPDES) stormwater permits.
4. Stormwater outfall density.
5. Age of sub-watershed development.
6. Sewer conversion.
7. Presence of older industrial operations.
8. Aging or failing sewer infrastructure.
9. Density of aging septic systems.

Based on the above factors the City will overlay of currently available GIS data to identify locations that are likely more susceptible to illicit discharges. This overlay plus information collected from dry-weather screening can be used throughout the permit term to highlight areas with the highest potential for illicit discharges. Current GIS data available to the City for this effort, and highlighted in Figure 1, includes:

1. Outfall locations.
2. Industrial zoned properties.
3. KPDES permitted facilities and outfall locations.
4. Stormwater outfall density.
5. Impaired water bodies.
6. Industrial zoned parcels.



The identification of priority areas is anticipated to be an adaptive or evolving process over the next MS4 permit term as the City collects more data. As the City updates the above GIS data and collects additional information, it intends to reassess the mapping overlay to highlight potential changes to priority areas for illicit discharges. This effort will inform the future plans for the prioritization of dry-weather screening within the MS4 area.

IMPLEMENTING FIELD ASSESSMENT ACTIVITIES

Section 2.2.3.3.b of the MS4 permit requires the following:

“Procedures for field assessment activities, including dry-weather screening of representative outfalls. The recommended level of effort is twenty percent (20%) of the major outfalls per year, with all of the major outfalls being address this permit term. Screening shall include, at a minimum, the visual inspection of the discharge for indicators of pollutants. Indicators shall include odor, oil sheen, discoloration, and high degree of siltation or aquatic plant growth. Alternatively, the permittee shall develop an approach based on screening factors determined to be more applicable to the area than dry-weather screening of representative outfalls. This approach shall be submitted with the SWQMP to the Division of Water for review and approval before implementing. The illicit discharge detection and elimination plan may require follow-up field water-quality sampling and/or analysis or laboratory analyses to determine the pollutant source and most effective plan of action.”

The City will implement field assessment activities for the dry-weather screening of major outfalls throughout its service area on an annual basis. The MS4 permit requires dry-weather screening of all major outfalls during the permit term. The City anticipates screening 20 percent of their major outfalls on an annual basis in order to meet this requirement during the 5-year permit cycle. The Engineering Department is responsible for overseeing and performing the dry-weather screening field assessment activities. These activities will likely be handled by the City’s field inspector. Currently the City will perform most dry-weather screening during dry periods within the fall season to capitalize on the reduced foliage cover. All illicit discharge screening activities will be tracked in a spreadsheet database and incorporated into the City’s GIS mapping. Additionally, illicit discharges reported through a citizen complaint will be tracked in the citizen complaint database and mapped in the GIS database once an illicit has been verified.

Specific methods and techniques can be used to perform the stormwater outfall inventory survey and dry-weather screening. USEPA defines dry weather as a period of 72 hours or more in which there is no precipitation. After this time, any discharge from an MS4 outfall may be non-stormwater related and could potentially be considered illicit. The Engineering Department will screen mapped outfalls during dry weather and use a Field Inspection Sheet and photographs, when appropriate, to record and document the condition of the outfalls and/or discharges occurring from those outfalls.

Throughout this permit term, the City is working to update its GIS database with the additional major outfall locations, within its MS4 area, based on the major outfall definition shown above. Following these GIS database update, maps showing the spatial projection of the City’s infrastructure and stormwater system (roads, streams, stormwater drainage network, and outfall locations) will be used to assess and verify major outfall locations. To better assist the Engineering Department with the field

assessment activities, the following list of equipment is recommended for locating and documenting stormwater outfalls, as well as testing for illicit discharges during dry-weather screening activities:

1. Waders
2. Measuring Tape
3. Watch
4. Camera
5. Spray Paint (or other marking equipment)
6. Gloves
7. Sampling Equipment (e.g. bottles, pH test strips, etc.)
8. Device with Explorer for ArcGIS (i.e., smart phone) and/or Trimble GPS unit
9. First Aid Kit
10. Flashlights and Batteries

The City uses an outfall field inspection sheet to characterize the general condition of the outfalls as well as indicate the potential for illicit discharges. Collecting this information at each outfall enables the City to assess the condition of the stormwater infrastructure and identify potential illicit discharges. The City's current field inspection sheet is included as Appendix B to this IDDE Plan.

Each time an outfall is encountered and/or dry weather screening is being performed the below steps should be followed.

1. When possible, notify the public prior to the field inspection visit through the utility bill, City Web site, newsletter, etc.
2. Current City GIS storm system map highlighting unique structure numbers, outfall locations, other storm infrastructure, streets, streams and other applicable landmark features to assist in field locating the outfall. If not already in the GIS database, the spatial location of the outfall must be documented in the field.
3. For each outfall screening, a City field inspection form must be completed (Appendix B). Once in the office, the data collected will be entered into an electronic database which contains geographic references that will allow the data to be mapped and integrated in the City's GIS system. At a minimum, the observation will involve the following:
 - a. Outfall number
 - b. Date, time, crew members' names
 - c. Time and date of last rainfall
 - d. Flows during dry-weather conditions
 - e. Water clarity and color
 - f. Presence of foam, oil sheen, trash, and/or floatable materials*
 - g. Presence of bacterial sheen or slimes*
 - h. Staining of banks, outfall structure, and/or vegetation*
 - i. Excessive vegetative growth*
 - j. Odor*
 - k. Verify location of the outfall matches the field map data
 - l. A picture of the outfall

*The characteristics above should be documented even if no flow was present at time of inspection.

A visual inspection along with odors and observations of the area surrounding the outfall can often provide sufficient evidence to determine if illicit discharges are present. For example, sewage can often be identified by the odor and the presence of floatable materials. Similarly, petroleum products can often be identified by odor and a rainbow sheen that exists on the surface of the water. If a flow is present, grab samples can be collected and tested for indicator parameters identified in *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004). If a grab sample is collected, a third party or City contracted laboratory will perform any required water quality testing. Some of the indicator parameters include:

1. Ammonia
2. Boron
3. Chlorine
4. Color
5. Conductivity
6. Detergents
7. *E. coli*
8. Fluoride
9. Hardness
10. pH
11. Potassium
12. Turbidity

In the event that the inspector is unsure of whether an outfall should or should not be documented, the crew should document the outfall. If a discharge is determined to be illicit through a visual and sensory assessment, City staff may obtain a sample of water for quality analysis. Using these methods and techniques will allow for an efficient collection of field data. As the City gains a better understanding of any illicit discharges that may be occurring in its storm drainage network, the above parameters may be tested, changed, and/or eliminated from the list.

PROVIDING PUBLIC REPORTING OPPORTUNITIES

Section 2.2.3.3.c of the MS4 permit requires the following:

“A mechanism and protocols in place that provides for the public reporting of spills and other discharges.”

Public observation and reporting has proven to be an effective method in detecting illicit discharges. A large majority of illicit discharges are “intermittent” or “transitory” in nature (i.e., they occur over a very short period of time or rarely at all). It is not feasible to have staff on site to examine all outfalls all of the time. For this reason, public observation can be a valuable asset in detecting illicit discharges. Public observation and reporting has proven invaluable in many Illicit Discharge Detection programs around the country. Using this resource will most likely allow the detection of more illicit discharges and increase the public’s knowledge of illegal discharges and substances that may flow into the storm drainage network.

To report a spill or an illicit discharge activity, any citizen can contact the Engineering Department at 270-824-2100. This information is posted on the City's Engineering Department website, under the Stormwater section. Additionally, citizens can report a stormwater or illicit discharge complaint through the City's public notification program GOMadisonville. This can be accessed through the City's website or via mobile device using the iPhone or Android app.

During this current permit cycle the City will install watershed signs throughout the service area to notify the public what watershed they are in and to provide a number to call to report a suspected illicit discharge in the area.

Any issues reported by the public are initially fielded by the Engineering Department. The City Engineer tracks the date, location, and description of the stormwater complaint in an excel database. The stormwater complaint is labeled in the database as an illicit discharge if the nature of the complaint is related to illegal dumping, spills, or illicit discharge related.

To help provide general information to the public, the City will work to distribute materials or flyers about stormwater topics, and the MS4 program. These materials will typically include the Engineering Department contact information and other general information about the MS4 program requirements including illicit discharges.

Section 53.12 of the City's illicit discharge ordinance includes provisions about notification of spills. Specifically, this section of the ordinance includes the following:

“Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or water of the U.S., that person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials, that person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, that person shall notify the city in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the city within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years.”

INVESTIGATING COMPLAINTS OR REPORTS ASSOCIATED WITH ILLICIT DISCHARGES

Section 2.2.3.3.d of the MS4 permit requires the following:

“Procedures to provide for the investigation of any complaints, reports, or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping. The permittee shall immediately investigate problems and violations determined to be emergencies or otherwise judged urgent or severe. Where water quality impairments are deemed severe or urgent, the permittee shall promptly

refer the incidents to the Department for Environmental Protection's Environmental Emergency 24-hour hotline at (502) 564-2380 or (800) 928-2380."

Upon receipt of a complaint, report, or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping, the City Engineer, or approved field staff, will conduct a site visit to investigate within 24 hours to follow-up on suspected violations, if received during business hours. If information is reported during non-business hours for a suspected illicit discharge, a site visit will be conducted during the next full working day. If an illicit discharge is suspected, City personnel immediately:

1. Conduct a visual screening of the site.
2. Identify the severity of the illicit discharge.
3. Document the findings by completing an outfall screening form.
4. If not present, notify the MS4 Coordinator of the findings.
5. Notify the property owner via certified mail if needed.
6. Contact Division of Water in severe or urgent water quality impairment issues.

Section 53.20 of the City's illicit discharge ordinance includes provisions for enforcement and abatement of identified illicit discharges. Specifically, this section of the ordinance includes the following:

- (A) *Notice of Violation. Whenever the City finds that a person or entity has violated a prohibition or failed to meet a requirement of this chapter, the city may order compliance by written notice of violation to the responsible person or entity. Such notice may require without limitation:*
- (1) *The performance of monitoring, analyses, and reporting;*
 - (2) *The elimination of illicit connections or discharges;*
 - (3) *That violating discharges, practices, or operations shall cease and desist;*
 - (4) *The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;*
 - (5) *Payment of a fine; and*
 - (6) *The implementation of source control or treatment BMPs.*
- (B) *If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. The notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work may be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.*

Upon review of the potential illicit discharge during the site visit, if the City determines the illicit discharge to be an emergency, judged urgent or severe, or an immediate threat to public health, the City Engineer will promptly report the incident to the Department for Environmental Protection's Environmental Emergency 24-hour hotline at 502-564-2380 or (800) 928-2380 and the Hopkins County Emergency Management Office at 270-821-5717. For non-emergency situations or illicit discharges determined to be non-hazardous, the City's normal procedures for responding to the illicit discharge will be followed.

DEVELOPING TIMEFRAMES FOR THE INVESTIGATION AND REMOVAL OF AN ILLICIT DISCHARGE

Section 2.2.3.3.e of the MS4 permit requires the following:

“Timeframes for the investigation and removal of illicit discharges.”

After a potential illicit discharge is documented, the City will attempt to trace the source of the illicit discharge to confirm the location of the source.

1. Prompt investigation of each complaint by trained staff within 24 hours, if received during business hours. If information is reported during non-business hours for a suspected illicit discharge, a site visit will be conducted during the next full working day.
2. If the location of the source is identified, the City will notify the responsible property owner in person or by telephone first. If the property owner is unreachable then the City will mail a Notice of Violation by certified mail for the illicit connection within 72 hours of identification.
3. In accordance with the IDDE Ordinance, the violator must respond within 7 days by either submitting a restoration plan and paying the fine or request in writing a hearing before the local Appeals Board.
4. If the violator responds by paying the fine, the violator is still required to remedy the violation.
5. If the violator fails to remedy the violation or request a hearing within 7 days of receipt of Notice of Violation the City Engineer is authorized to issue another citation and the remedy the violation. The City shall be fully reimbursed by the responsible party for these actions.

TRACING THE SOURCE OF AN ILLICIT DISCHARGE

Section 2.2.3.3.f of the MS4 permit requires the following:

“Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, collecting and analyzing water samples, and other detailed inspection procedures.”

If the City has confirmed the presence of an illicit discharge, attempts will be made to trace the source of the illicit discharge. The magnitude of the efforts to trace the source will be dependent upon the type of connection. The City may implement a combination of methods to isolate the specific source of the illicit discharge. The following highlights appropriate approaches for tracing a suspected illicit discharge.

1. Storm Drain Networks
 - a. Follow storm piping to first upstream manhole or catch basin.
 - b. Remove manhole cover and visually determine if discharge still present.
 - c. If discharge is still present, repeat procedure on next manhole upstream. If storm lines split, follow one path and if discharge not present come back to last manhole where discharge was present and trace up the next branch.

- d. After discharge has been pinpointed to an area, i.e. present in manhole downstream but absent upstream, then investigate the area for possible sources.
- e. If no obvious sources exist, methods such as sandbagging or damming the trunk, dye testing, smoke testing, and or CCTV, may be used to determine the source.

2. Stream Networks

If the discharge is in the main stem of a stream or creek, follow the discharge upstream. If it can be traced back to a pipe, follow the above steps to pinpoint the illicit discharge. If the discharge is not found to be coming from a pipe a watershed or drainage area investigation can be performed. This method relies on an analysis of land use or other characteristics of the drainage area that is producing the illicit discharge. The investigation can be as simple as a “windshield” survey of the drainage area or a more complex mapping analysis of the storm drain network and potential generating sites. Drainage area investigations work best when prior indicator monitoring reveals strong clues as to the likely generating site producing the discharge. Example investigations may include land use or zoning investigations, permit reviews, as-built reviews, aerial photography analysis, and or other property ownership certifications.

3. Unfound Discharge

In all cases if the discharge is not visible upon arrival screen the surrounding catch basins, ditches, upstream bridges and junctions, etc. to verify they discharge cannot be found and has likely ceased. The investigation will be documented as not found for future reference in the City’s GIS database.

Depending on each situation the City may use a combination of the investigation options described above to trace the source of an illicit discharge. The procedure used to trace the source will be documented to allow for future decisions on appropriate procedures for specific types of illicit discharges.

REMOVING THE SOURCE OF THE ILLICIT DISCHARGE

Section 2.2.3.3.g of the MS4 permit requires the following:

“Procedures for removing the source of the discharge; including notification of appropriate authorities, notification of property owners; follow-up inspections; and enforcement if the discharge is not eliminated.”

Following the procedures described in the section above related to tracing the source of an illicit discharge, the City will take appropriate actions to notify the responsible party and ensure the illicit discharge is removed. According to the *Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004), there are four questions that should be answered for each illicit discharge to determine appropriate procedure for corrective action, as follows:

1. Who is responsible?
2. What methods will be used to fix it?
3. How long will it take?
4. How will removal be confirmed?

The source of the discharge will be needed to appropriately answer these questions. Typical sources of illicit discharges include internal plumbing connections, service lateral cross-connections, infrastructure failure within the sanitary sewer system or MS4, and indirect discharges resulting from leaks, spills, or overflows. In all cases after a suspected illicit is found and the responsible party or violator identified:

1. The City Engineer will notify the responsible property owner in person or by telephone first. If the property owner is unreachable then the City will mail a Notice of Violation by certified mail for the illicit connection within 72 hours of identification.
2. The violator must respond within 7 days by either submitting a restoration plan and paying the fine or request in writing a hearing before the local Appeals Board.
3. If the violator responds by paying the fine, the violator is still required to remedy the violation within 7 days.
4. If the violator fails to remedy the violation or request a hearing within 7 days of receipt of Notice of Violation the City Engineer is authorized to issue another citation and the remedy the violation. The City shall be fully reimbursed by the responsible party for these actions.
5. If a violation has not been corrected within 7 days of the decision of the Appeals Board, upholding the decision of the City, the City Engineer is authorized to take any and all measures necessary to abate the violation.
6. Within 14 days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within 30 days. If the amount due is not paid within 30 days as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a lien on the property for the amount of the assessment.
7. Once the City confirms the illicit discharge has been eliminated the responsible party will be considered in compliance with the ordinance requirements.
8. All steps taken will be documented in the City's illicit discharge tracking database for reporting and GIS mapping purposes.

Figure 2 provides an example Flow Chart for Corrective Action from *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004) demonstrating a recommended process to achieve a corrective action.

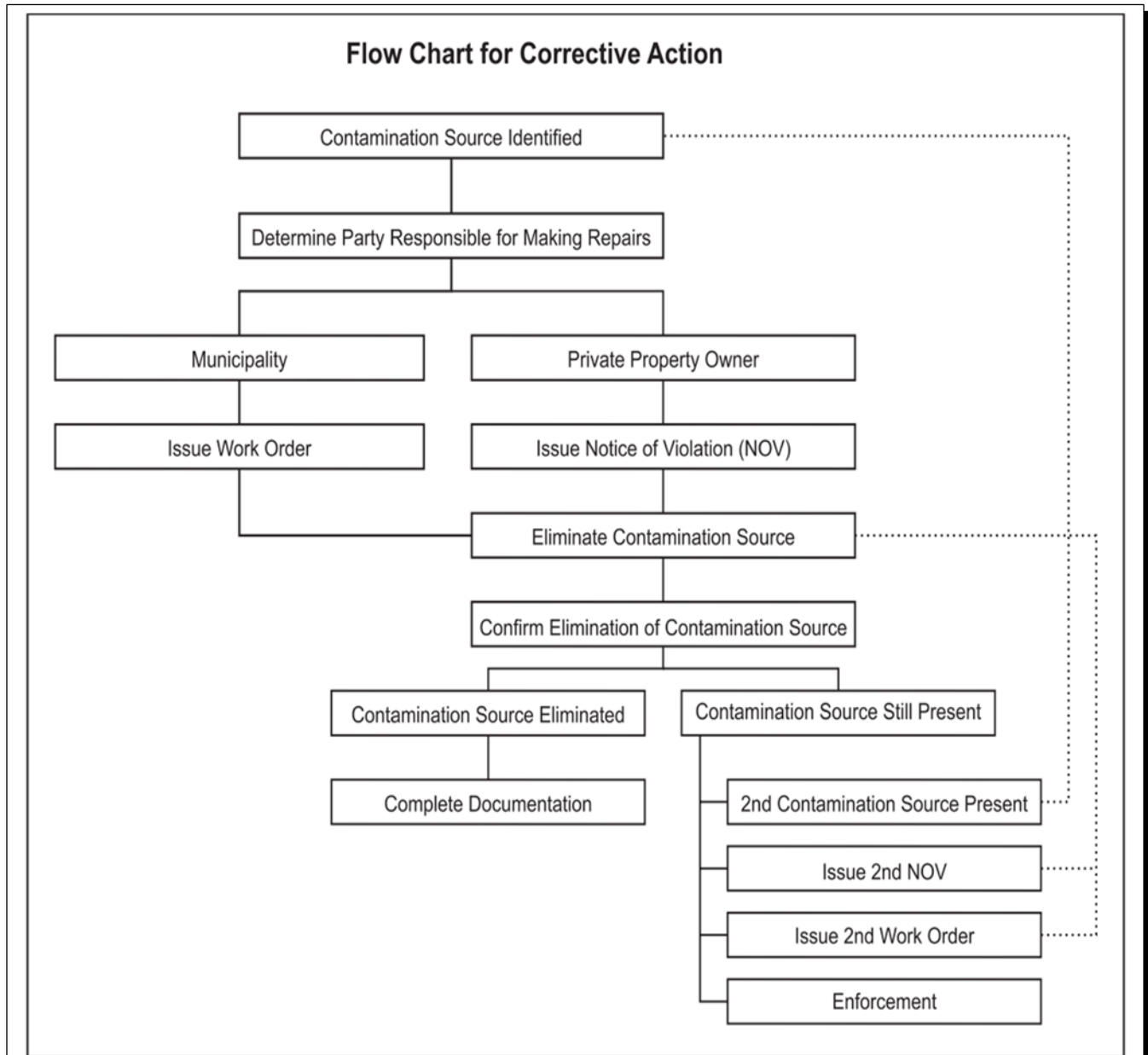


Figure 2 Example Flowchart for Corrective Action

Source: *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004)

The *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004) also provides a summary of recommendation methods to solve illicit discharge depending on the type of discharge and the source. Figure 3 provides an overview of the information presented.

Table 26: Methods to Fix Illicit Discharge		
Type of Discharge	Source	Removal Action(s)
Sewage	Break in right-of-way	Repair by municipality
	Commercial or industrial direct connection	Enforcement
	Residential direct connection	Enforcement; Incentive or aid
	Infrequent discharge (e.g., RV dumping)	Enforcement; Spill response
	Straight pipes/septic	Enforcement; Incentive or aid
Wash water	Commercial or industrial direct connection	Enforcement; Incentive or aid
	Residential direct connection	Enforcement; Incentive or aid
	Power wash/car wash (commercial)	Enforcement
	Commercial wash down	Enforcement
	Residential car wash or household maintenance-related activities	Education
Liquid wastes	Professional oil change/car maintenance	Enforcement; Spill response
	Heating oil/solvent dumping	Enforcement; Spill response
	Homeowner oil change and other liquid waste disposal (e.g., paint)	Warning; Education; Fines
	Spill (trucking)	Spill response
	Other industrial wastes	Enforcement; Spill response

Figure 3 Methods to Fix Illicit Discharge

Source: *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (CWP 2004)

ADOPTING PROCEDURES FOR EVALUATION AND ASSESSMENT

Section 2.2.3.3.h of the MS4 permit requires the following:

“Procedures for Illicit Discharge Program evaluation and assessment, including tracking the number and type of spills of illicit discharges identified, inspections made; and any feedback received from public education efforts.”

The City can revise any data collection efforts to allow for its most efficient data collection throughout the urbanized area. The City’s IDDE program will involve consistent evaluation procedures and record keeping as outlined in this document. Through the implementation process the City’s field staff will learn how to evaluate, document and mitigate illicit discharge locations. Several objectives can be achieved through the implementation of the IDDE program:

1. Initiate efforts to meet requirements set forth in the MS4 Phase II permit.
2. Better understand the condition of a segment of the stormwater drainage network.
3. Expose and train staff on the appropriate procedures associated with illicit discharge detection and elimination.

4. Analyze and modify the data collection techniques used to allow for the most efficient data collection in other parts of the stormwater drainage network.

The City's illicit discharge program will continue to adapt and evolve over the next 5-year MS4 permit term. The City recognizes that KDOW's latest definition of major outfalls, including the reference to industrial land uses, will likely result in the identification of additional outfalls within the City. As the City evaluates its system and updates their GIS database over the next 5 years, additional information about the physical components of the MS4 system may also result in the identification of priority areas that could be more prone to illicit discharges. Additionally, as the City continues to conduct dry-weather screening on an annual basis, the City's database of information related to the screening and illicit discharges will continue to grow, offering a larger dataset that can be evaluated over time to allow the City to make adjustments moving forward.

APPENDIX A
ILLCIT DISCHARGE DETECTION AND ELIMINATION ORDINANCE

Print

Madisonville, KY Code of Ordinances

CHAPTER 53: ILLICIT DISCHARGES AND CONNECTIONS

Section

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Cross-reference:

Water and sewer provisions in general, see Ch. 52

GENERAL PROVISIONS

§ 53.01 PURPOSE; INTENT.

The purpose of this chapter is to provide for the health, safety, and general welfare of the citizens of Madisonville through the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the national pollutant discharge elimination system (NPDES) permit process. The objectives of this chapter are:

(A) To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user.

(B) To prohibit illicit connections and discharges to the municipal separate storm sewer system.

(C) To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this chapter.

(Ord. 2007-16, passed 7-16-07)

§ 53.02 DEFINITIONS.

For the purposes of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

BEST MANAGEMENT PRACTICES (BMPs). Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. **BMPs** also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

BMP PLAN (STORMWATER POLLUTION PREVENTION PLAN or SWPPP). A document which describes the best management practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the maximum extent practicable.

CLEAN WATER ACT. The federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.), and any subsequent amendments thereto and regulations promulgated thereunder.

COMMON PLAN OF DEVELOPMENT.

(1) A construction activity is part of a larger **COMMON PLAN OF DEVELOPMENT** if it is completed in one (1) or more of the following ways: in separate stages; in separate phases; in combination with other construction activities. It is identified by the documentation that identifies the scope of the project including such things as the following: plats; blueprints; marketing plans; contracts; building permits; public notice or hearing; zoning requests. It can include one operator or many operators.

(2) Example: A subdivision is being built. You are grading three-fourths (3/4) of an acre, another company is clearing four (4) different acres, and a contractor is excavating another one-half (1/2) acre. In this case, the total area that would be disturbed is five and one-fourth (5-1/4) acres, so each operator would fall under the requirements associated with disturbing one (1) or more acres.

CONSTRUCTION ACTIVITY. Activities subject to NPDES construction permits. These include construction projects resulting in land disturbance of one (1) acre or more or part of a common plan of development. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

HAZARDOUS MATERIALS. Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

ILLEGAL DISCHARGE. Any direct or indirect non-stormwater discharge to the storm drain system, except as exempted in § 53.06.

ILLICIT CONNECTIONS. Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by the city.

INDUSTRIAL ACTIVITY. Activities subject to NPDES industrial permits as defined in 40 CFR, § 122.26 (b)(14).

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT. A permit issued by the EPA (or by a state under authority delegated pursuant to 33 U.S.C. § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

NON-STORMWATER DISCHARGE. Any discharge to the storm drain system that is not composed entirely of stormwater.

POLLUTANT. Anything which causes or contributes to pollution. **POLLUTANTS** may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, and accumulations, so that same may cause or contribute to pollution; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coil form and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

STORM DRAINAGE SYSTEM. Publicly-owned facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

WASTEWATER. Any water or other liquid, other than uncontaminated stormwater, discharged from a facility.

(Ord. 2007-16, passed 7-16-07)

§ 53.03 APPLICABILITY.

This chapter shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by the city.

(Ord. 2007-16, passed 7-16-07)

§ 53.04 RESPONSIBILITY FOR ADMINISTRATION.

The Madisonville Engineering Department shall administer, implement, and enforce the provisions of this chapter. Any powers granted or duties imposed upon the city may be delegated in writing by the City Engineer to persons or entities acting in the beneficial interest of or in the employ of the Madisonville Engineering Department.

(Ord. 2007-16, passed 7-16-07)

§ 53.05 ULTIMATE RESPONSIBILITY.

The standards set forth herein and promulgated pursuant to this chapter are minimum standards; therefore this chapter does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

(Ord. 2007-16, passed 7-16-07)

§ 53.06 DISCHARGE PROHIBITIONS.

(A) No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater.

(B) The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

(1) The following discharges are exempt from discharge prohibitions established by this chapter:

- (a) Water line flushing or other potable water sources;
- (b) Landscape irrigation or lawn watering;
- (c) Diverted stream flows;
- (d) Rising ground water;
- (e) Ground water;
- (f) Infiltration to storm drains;
- (g) Uncontaminated pumped ground water;
- (h) Foundation or footing drains (not including active groundwater dewatering systems);
- (i) Crawl space pumps;
- (j) Air conditioning condensation;
- (k) Springs;
- (l) Non-commercial washing of vehicles;
- (m) Natural riparian habitat or wet-land flows;
- (n) Swimming pools (if dechlorinated - less than one (1) PPM chlorine);
- (o) Fire fighting activities.

(2) Discharges specified in writing by the city as being necessary to protect public health and safety.

(3) Dye testing is an allowable discharge, but requires a verbal notification to the Engineering Department prior to the time of the test.

(4) The prohibition shall not apply to any non-stormwater discharge 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, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

(C) Prohibition of Illicit Connections.

(1) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this chapter if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

(Ord. 2007-16, passed 7-16-07)

§ 53.07 SUSPENSION OF MS4 ACCESS.

(A) Suspension due to Illicit Discharges in Emergency Situations. The city may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the city may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons.

(B) Suspension due to the Detection of Illicit Discharge. Any person discharging to the MS4 in violation of this chapter may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The city will notify a violator of the proposed termination of its MS4 access. The violator may petition the city for a reconsideration and hearing. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this section, without the prior approval of the city.

(Ord. 2007-16, passed 7-16-07)

§ 53.08 INDUSTRIAL OR CONSTRUCTION ACTIVITY DISCHARGES.

Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with the permit is required prior to the allowing of discharges to the MS4.

(Ord. 2007-16, passed 7-16-07)

§ 53.09 MONITORING OF DISCHARGES.

(A) Applicability. This section applies to all facilities that have stormwater discharges associated with industrial or construction activity.

(B) Access to Facilities.

(1) The city shall be permitted to enter and inspect facilities subject to regulation under this chapter as often as may be necessary to determine compliance with this chapter. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the city.

(2) Facility operators shall allow the city ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.

(3) The city shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the city to conduct monitoring and/or sampling of the facility's stormwater discharge.

(4) The city has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written request of the city and shall not be replaced. The costs of clearing such access shall be borne by the operator.

(6) Unreasonable delays in allowing the city access to a permitted facility is a violation of a stormwater discharge permit and of this chapter. A person who is the operator of a facility with a NPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies the city reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this chapter.

(7) If the city has been refused access to any part of the premises from which stormwater is discharged, and he or she is able to demonstrate probable cause to believe that there may be a violation of this chapter, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this chapter or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the city may seek issuance of a search warrant from any court of competent jurisdiction.

(Ord. 2007-16, passed 7-16-07)

§ 53.10 REQUIREMENT TO PREVENT, CONTROL, AND REDUCE STORMWATER POLLUTANTS BY USE OF BEST MANAGEMENT PRACTICES.

The city will identify best management practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from

accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at that person's expense, additional structural and non-structural BMPs 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. These BMPs shall be part of a BMP plan as necessary for compliance with requirements of the NPDES permit.

(Ord. 2007-16, passed 7-16-07)

§ 53.11 WATERCOURSE PROTECTION.

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

(Ord. 2007-16, passed 7-16-07)

§ 53.12 NOTIFICATION OF SPILLS.

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or water of the U.S., that person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials, that person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, that person shall notify the city in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the city within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years.

(Ord. 2007-16, passed 7-16-07)

VIOLATIONS; ENFORCEMENT; APPEALS

§ 53.20 ENFORCEMENT.

(A) Notice of Violation. Whenever the City finds that a person or entity has violated a prohibition or failed to meet a requirement of this chapter, the city may order compliance by written notice of violation to the responsible person or entity. Such notice may require without limitation:

- (1) The performance of monitoring, analyses, and reporting;
- (2) The elimination of illicit connections or discharges;
- (3) That violating discharges, practices, or operations shall cease and desist;
- (4) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
- (5) Payment of a fine; and
- (6) The implementation of source control or treatment BMPs.

(B) If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. The notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work may be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

(Ord. 2007-16, passed 7-16-07)

§ 53.21 COMPENSATORY ACTION.

In lieu of enforcement proceedings, penalties, and remedies authorized by this chapter, the city may impose upon a violator alternative compensatory actions, such as storm drain marking, attendance at compliance workshops, creek cleanup, and the like.

(Ord. 2007-16, passed 7-16-07)

§ 53.22 APPEAL OF NOTICE OF VIOLATION.

(A) Any person receiving a notice of violation may appeal the determination of the city. After issuing a citation, the City Engineer shall deliver a copy of the citation to the person designated by the local Appeals Board. Upon receipt of a notice of violation, the violator shall respond within seven (7) days by either submitting a restoration plan to the city and paying the fine, or requesting in writing a hearing before the local Appeals Board to contest the citation and/or the amount of the proposed fine. If the violator responds by paying the civil fine, the violator shall still be required to remedy the violation. If the violator fails to remedy the violation or request a hearing within the designated time, the City Engineer is authorized to issue another citation and to remedy the violation. After determining that compliance has been achieved in the allowed correction time, the City Engineer shall report that statistic to the local Appeals Board.

(B) If the violator does not request a hearing before the local Appeals Board and the property is not brought into compliance, or if the local Appeals Board orders the property be brought into compliance and the violator refuses, failure to so comply shall constitute permission to an official, employee or other authorized agent of the city to enter upon the property to remedy the situation and to abate the violation.

(Ord. 2007-16, passed 7-16-07)

§ 53.23 ENFORCEMENT MEASURES AFTER APPEAL.

If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or, in the event of an appeal, within seven (7) days of the decision of the Appeals Board upholding the decision of the city, then representatives of the city may enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

(Ord. 2007-16, passed 7-16-07)

§ 53.24 COST OF ABATEMENT OF VIOLATION.

Within fourteen (14) days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within thirty (30) days. If the amount due is not paid within thirty (30) days as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. Any person violating any of the provisions of this chapter shall become liable to the city by reason of such violation.

(Ord. 2007-16, passed 7-16-07)

§ 53.25 INJUNCTIVE RELIEF.

It shall be unlawful for any person or entity to violate any provision or fail to comply with any of the requirements of this chapter. If a person or entity has violated or continues to violate the provisions of this chapter, the city may petition for a preliminary or permanent injunction restraining the person or entity from activities which would create further violations or compelling the person or entity to perform abatement or remediation of the violation.

(Ord. 2007-16, passed 7-16-07)

§ 53.26 VIOLATION DEEMED PUBLIC NUISANCE.

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this chapter is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

(Ord. 2007-16, passed 7-16-07)

§ 53.27 REMEDIES NOT EXCLUSIVE.

The remedies listed in this chapter are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the city to seek cumulative remedies.

(Ord. 2007-16, passed 7-16-07)

§ 53.99 PENALTY.

(A) Any person or entity that has violated or continues to violate this chapter shall be subject to a fine of not more than two hundred fifty dollars (\$250.00) dollars per violation per day and/or imprisonment for a period not to exceed ninety (90) days.

(B) The city may recover all attorney's fees court costs and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses.

(Ord. 2007-16, passed 7-16-07)

City of Madisonville, Kentucky
MS4 Outfall Reconnaissance Inventory
Field Data Sheet

SECTION 1	Watershed/Stream:		Outfall ID:		
	Date:		Time:		
	City Personnel:		Form Completed By:		
	Conditions (circle): Sunny Partly Cloudy Overcast Windy Calm		Date and Time of Last Rainfall:		
	Photo Numbers:		GIS Device:		
Land Use in Drainage Area (Check all that apply - This information may be collected in the office or the field, whichever is most convenient):					
<input type="checkbox"/> Industrial <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Open Space <input type="checkbox"/> Urban-Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Institutional Other: _____					
SECTION 2	LOCATION	MATERIAL	SHAPE	DIMENSIONS	SUBMERGED
	<input type="checkbox"/> CLOSED PIPE	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> STEEL <input type="checkbox"/> OTHER: _____	<input type="checkbox"/> CIRCULAR <input type="checkbox"/> ELLIPTICAL <input type="checkbox"/> BOX <input type="checkbox"/> OTHER: _____	DIAMETER/DIMENSIONS: _____ _____	In Water: <input type="checkbox"/> NO <input type="checkbox"/> PARTIALLY <input type="checkbox"/> FULLY
	<input type="checkbox"/> OPEN DRAINAGE (Ditch or Channel)	<input type="checkbox"/> CONCRETE <input type="checkbox"/> EARTHEN <input type="checkbox"/> RIP-RAP <input type="checkbox"/> OTHER: _____	<input type="checkbox"/> TRAPEZOID <input type="checkbox"/> PARABOLIC <input type="checkbox"/> OTHER: _____	DEPTH: _____ TOP WIDTH: _____ BOTTOM WIDTH: _____	With Sediment: <input type="checkbox"/> NO <input type="checkbox"/> PARTIALLY <input type="checkbox"/> FULLY
	FLOW PRESENT	<input type="checkbox"/> YES <input type="checkbox"/> NO	<i>(If No, skip to section 4)</i>		
	FLOW DESCRIPTION (IF PRESENT)	<input type="checkbox"/> TRICKLE <input type="checkbox"/> MODERATE <input type="checkbox"/> SUBSTANTIAL			
SECTION 3	Are Any Physical Indicators Present in the Flow? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If No, skip to section 4)</i>				
	INDICATOR	CHECK IF PRESENT	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)	
	ODOR	<input type="checkbox"/>	<input type="checkbox"/> SEWAGE <input type="checkbox"/> PETROLEUM/GAS <input type="checkbox"/> RANCID/SOUR <input type="checkbox"/> SULFIDE <input type="checkbox"/> CHLORINE <input type="checkbox"/> OTHER	<input type="checkbox"/> 1-FAINT <input type="checkbox"/> 2-EASILY DETECTED <input type="checkbox"/> 3-NOTICABLE FROM A DISTANCE	
	COLOR	<input type="checkbox"/>	<input type="checkbox"/> CLEAR <input type="checkbox"/> GREEN <input type="checkbox"/> BROWN <input type="checkbox"/> GRAY <input type="checkbox"/> YELLOW <input type="checkbox"/> RED <input type="checkbox"/> ORANGE <input type="checkbox"/> OTHER	<input type="checkbox"/> 1-FAINT COLORS IN SAMPLE BOTTLE <input type="checkbox"/> 2-CLEARLY VISIBLE IN SAMPLE BOTTLE <input type="checkbox"/> 3-CLEARLY VISIBLE IN OUTFALL FLOW	
	TURBIDITY	<input type="checkbox"/>	SEE SEVERITY	<input type="checkbox"/> 1-SLIGHT CLOUDINESS <input type="checkbox"/> 2-CLOUDY <input type="checkbox"/> 3-OPAQUE	
FLOATABLES	<input type="checkbox"/>	<input type="checkbox"/> SEWAGE (TOILET PAPER, ETC.) <input type="checkbox"/> PETROLEUM (OIL SHEEN) <input type="checkbox"/> SUDS <input type="checkbox"/> OTHER: _____	<input type="checkbox"/> 1-FEW/SLIGHT; ORIGIN NOT OBVIOUS <input type="checkbox"/> 2-SOME; INDICATIONS OF ORIGIN (E.G. POSSIBLE SUDS) <input type="checkbox"/> 3-SOME; ORIGIN CLEAR (E.G. FLOATING SANITARY MATERIAL)		
SECTION 4	Are any Physical Indicators that are not related to flow present? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If No, skip to section 5)</i>				
	INDICATOR	CHECK IF PRESENT	DESCRIPTION	COMMENTS	
	OUTFALL DAMAGE	<input type="checkbox"/>	<input type="checkbox"/> SPALLING, CRACKING, OR CHIPPING <input type="checkbox"/> PEELING PAINT <input type="checkbox"/> CORROSION <input type="checkbox"/> DEFORMATION (INDICATE TYPE AND SEVERITY OF DEFORMATION) _____		
	DEPOSITS / STAINS	<input type="checkbox"/>	<input type="checkbox"/> OILY <input type="checkbox"/> FLOW LINE <input type="checkbox"/> PAINT <input type="checkbox"/> OTHER <input type="checkbox"/> SILTATION OF PIPE OUTFALL % BLOCKAGE _____		
	ABNORMAL VEGETATION	<input type="checkbox"/>	<input type="checkbox"/> EXCESSIVE <input type="checkbox"/> INHIBITED		
	POOR POOL QUALITY	<input type="checkbox"/>	<input type="checkbox"/> ODORS <input type="checkbox"/> SUDS <input type="checkbox"/> EXCESSIVE ALGAE <input type="checkbox"/> COLORS <input type="checkbox"/> FLOATABLES <input type="checkbox"/> OIL SHEEN <input type="checkbox"/> OTHER		
	PIPE BENTHIC GROWTH	<input type="checkbox"/>	<input type="checkbox"/> BROWN <input type="checkbox"/> GREEN <input type="checkbox"/> ORANGE <input type="checkbox"/> OTHER		
EROSION UNDER OUTFALL	<input type="checkbox"/>	<input type="checkbox"/> MINIMAL <input type="checkbox"/> EXCESSIVE <input type="checkbox"/> MODERATE			
SECT. 5	RECOMMENDED ACTIONS / ACTIONS TAKEN				
	<input type="checkbox"/> DEBRIS REMOVED <input type="checkbox"/> PIPE IN NEED OF REPAIR <input type="checkbox"/> PIPE NEEDS TO BE REPLACED WORK REQUEST # _____ <input type="checkbox"/> SEDIMENT NEEDS TO BE REMOVED <input type="checkbox"/> NO ACTION NECESSARY <input type="checkbox"/> OTHER (DESCRIBE) → _____				
SECT. 6	OVERALL OUTFALL CHARACTERIZATION				
	<input type="checkbox"/> NO EVIDENCE <input type="checkbox"/> SUSPECT (ONE OR MORE INDICATORS WITH A SEVERITY OF 3) <input type="checkbox"/> POTENTIAL (PRESENCE OF 2 OR MORE INDICATORS) <input type="checkbox"/> OBVIOUS				

NOTES: