

NPDES PHASE II

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN



LAKE COUNTY, INDIANA

PERMIT #INR040124

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NPDES Phase II
Stormwater Quality Management Plan
Illicit Discharge Detection and Elimination
(IDDE) Plan Update

Lake County, Indiana

Prepared for

Lake County, Indiana

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CHAPTER 1**ILLICIT DISCHARGE DETECTION AND
ELIMINATION (IDDE) PLAN**

This plan details Lake County's strategy to detect and eliminate illicit discharges into the Municipal Separate Storm Sewer System (MS4) conveyance in accordance with the County's Stormwater Quality Management Plan (SWQMP) as required by 327 IAC 15-13 (Rule 13). This plan includes a storm sewer mapping plan and schedule, illicit discharge definitions, an outfall screening procedure, a source identification procedure, a list of active industrial facilities that discharge into the County's MS4, and a master implementation schedule.

1.1 STORM SEWER MAP DEVELOPMENT

According to 327 IAC 15-13-14, Lake County was required to map all known stormwater outfall conveyance systems under the MS4 Operator's control with a pipe diameter of twelve (12) inches or larger and open ditches with a two (2) foot or larger bottom width within the first five (5) year permit term. During the second permit term, Lake County is required to map "all remaining outfall conveyance systems" within the MS4 jurisdictional area which are under the control of the MS4.

Lake County defines "outfall" and "conveyance" according to the definition provide by the Indiana Department of Environmental Management (IDEM) in 327 IAC 15-13-5 (52) and 327 IAC 15-13 (10) respectively. Outfall is defined as a point source discharge via a conveyance of stormwater runoff into a water of the state. Conveyance is defined as any structural process for transferring stormwater between at least two (2) points, including piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

As of March 2012, it is estimated that 100% of the known separate storm sewer system has been mapped through a series of mapping conventions. All subdivision developments within the MS4 boundaries have as-built drawings submitted through the County's permitting process. Further the majority of these as-builts have been electronically scanned for utilization by the Lake County Surveyor's Office. The Lake County Surveyor's Office is currently developing and integrating a mapping Atlas identifying stormwater inlets and outlets within the MS4

area as well as associated GPS locations, photos, and attribute data for each point.

The County requires developers to submit electronic copies of as-built plans for new stormwater conveyance systems and the associated outfalls that discharge into the County's designated receiving waters. These plans must be submitted in a format that complements the County's mapping system. For consistency with Rule 13, the County requires developers to provide the latitude and longitude coordinates of outfalls in decimal degrees or by using at a minimum, mapping grade GPS technology. County staff will inspect the as-builts for compliance with the County's SWQMP. Once approved, the new conveyance system and outfall locations will be incorporated into the County's mapping system and database.

1.2 ILLICIT DISCHARGE

The term "illicit discharge" is defined in 327 IAC 15-13-5 (28) as any discharge to an MS4 conveyance system that is not composed entirely of stormwater, except that naturally occurring floatable, such as leaves or tree limbs. The definition provides examples of illicit discharges as sanitary wastewater, septic tank effluent, car wash wastewater, oil disposal, radiator flushing disposal, laundry wastewater, roadway accident spillage, and household hazardous wastes.

Illicit discharges can be categorized as either direct or indirect. Examples of direct illicit discharges include sanitary wastewater; piping directly connected from a home to the storm sewer; materials (e.g., used motor oil) that have been dumped illegally into a storm drain catch basin; a shop floor drain that is connected to the storm sewer; or a cross-connection between the sanitary sewer and storm sewer systems. Examples of indirect illicit discharges include a damaged sanitary sewer line that is leaking into a storm sewer line or a failing septic system that is leaking into a storm sewer line or causing surface discharge into the storm sewer.

As stated in 327 IAC 15-13-14 (d), the Lake County SWQMP need not address the following categories of non-storm water discharges or flows unless the MS4 Operator identifies them as significant contributors of pollutants to the MS4 conveyance system. Therefore, in the interim, the County will not consider those items listed in **Table 1-1** as illicit discharges. However, if in the future the County determines any of

these activities to be illicit discharges, the County will update its IDDE Plan accordingly.

Table 1-1: Exempt Non-Stormwater Discharges

Water Line Flushing	Irrigation Water
Landscape Irrigation	Springs
Diverted Stream Flows	Water From Crawl Space Pumps
Rising Ground Water	Footing Drains
Uncontaminated Ground Water Infiltration	Lawn Watering
Uncontaminated Pumped Ground Water	Individual Residential Car Washing
Discharges from Potable Water Sources	Flows From Riparian Habitats and Wetlands
Foundation Drains	Dechlorinated Swimming Pool Discharges
Air Conditioning Condensate	Street Wash Water
Discharges from Firefighting Activities	

1.3 DRY WEATHER SCREENING

As required by Rule 13, Lake County has implemented a dry weather screening program for known stormwater outfalls with a pipe diameter of twelve (12) inches or larger and open ditches with a two (2) foot or larger bottom width. It is anticipated that this requirement will be met by June 30, 2012. In order to complete this requirement, Lake County has developed a prioritization system for outfall screening:

1. Outfalls within the MS4 jurisdictional areas
2. Outfalls along regulated drains
3. Outfalls with a pipe diameter of 12 inches or larger
4. Outfalls along County Roads (with easements)
5. Outfalls from subdivisions along public roads

This prioritization system will allow the County to screen those outfalls for which they control the conveyance system, or have the ability to make repairs or complete investigations should an illicit discharge be detected.

Following this same prioritization, it is anticipated that such screening will be completed once per permit term. Additional screenings during the subsequent permit terms may be conducted depending on the results of the initial inspections. Lake County will also conduct outfall screening in response to complaints or reports of suspected illicit discharges, as deemed appropriate.

Screening will be completed only during dry weather. The County defines dry weather as a period in which there has been no rainfall or

no more than one-tenth (0.1) of an inch within a seventy-two (72) hour period. The inspector will conduct and document physical observations at each outfall. For those outfalls preceded by a retention pond, the inspector will conduct and document physical observations of the conveyance that leads from the pond.

In the event that an outfall or pond conveyance system is discharging during dry weather and the physical observations warrant, the inspector will conduct and document a series of in-field water quality tests. If physical observations and in-field tests suggest water quality problems, the inspector may choose to collect a sample for further laboratory analyses. The outfall inspector will utilize the outfall inspection checklist included in **Appendix 1**. The water quality parameters to be tested are listed in **Table 1-2**.

Table 1-2: Water Quality Test Parameters and Uses

Water Quality Test	Method
Detergent*	Ampoule kit; LaMotte
Dissolved Oxygen	Test tabs; LaMotte
<i>E. coli</i> *	Microbac Laboratory
Nitrate	Test strips; LaMotte
pH	Test strips; Micro Essential
Phosphate	Test tabs: LaMotte
Temperature	

* Sampling completed based on discretion of field crew

1.4 SOURCE IDENTIFICATION

Lake County will attempt to determine the source of all dry weather discharges. However, recognizing that most dry weather discharges will not be constant, the County understands that identifying the source of 100% of all illicit discharges is unlikely.

For each dry weather discharge suspected of being illicit, the inspector, utilizing a map of the storm sewer system, will follow the drainage ditch or identify the most up-pipe manhole with a junction in an attempt to identify the general location from which the discharge originates. The inspector may opt to collect additional field and laboratory samples as he or she make their way upstream or up-pipe in order to compare the outfall sample results with the in-line results in hope of identifying similarities between the sites. If, from following the drainage ditch or inspecting the manhole, the inspector can determine the direction from which the discharge originates, he or she will then continue upstream or to the next up-pipe manhole until he or she can pinpoint the source or

the general vicinity from where the discharge is originating. If the inspector cannot identify the specific source through visual observation, a dye test, smoke test, or video inspection will be necessary to determine the source of the discharge.

1.4.1 Dye Testing

If an inspector is able to narrow down the likely source of a discharge to a reasonable number of homes or businesses, the County will perform a dye test one building at a time. Such testing will likely be conducted with the assistance of the Lake County Health Department. Non-toxic dye will be flushed into toilets, sinks, and other non-stormwater sources. Storm sewer outfalls will be observed to check for the presence of the dye. Prior to testing, the County will contact building owners and occupants to obtain access to the buildings. Dye testing will follow the procedural protocols developed by the Lake County Health Department.

1.4.2 Smoke Testing

If dye tests prove unsuccessful, the County may opt to conduct smoke testing. A smoke test 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 crack and leaks in the storm sewer lines. The injection will be done by placing a smoke bomb in the storm sewer manhole below ground and forcing air into the system. Individual staff will be stationed at points of suspected illegal connections or cracks/leaks, noting any escape of smoke. Prior to performing tests, Lake County will inform building owners and occupants in the area, as well as all local Fire and Police Departments.

1.4.3 Video Testing

Video inspections involve filming the storm sewer system and tracking a discharge to its source. Due to the expertise and technology required to conduct such investigations, the cost associated may be high. In addition, the firms that provide such services may not be readily available to conduct a video inspection, increasing the chances that the discharge may cease before it can be thoroughly investigated. Therefore, Lake County will only rely on video testing if smoke testing and/or dye testing prove insufficient in the identification of a discharge.

1.5 IDENTIFICATION OF ACTIVE INDUSTRIAL FACILITIES

All industrial facilities located within the MS4 jurisdictional areas are listed in **Appendix 2**. This information will be reviewed annually to ensure the list is accurate and current. The table will assist the stormwater personnel with identifying potential pollutants of concern as well as the potential sources of illicit discharge.

1.6 ELIMINATING ILLICIT DISCHARGES

The goal of Lake County's IDDE Plan is to address 100% of the illicit discharges identified. The County understands, however, that for a variety of reasons, immediate elimination of 100% of identified discharges is not likely due to the political and socioeconomic circumstances that can play a role in such issues. The County will attempt to enforce and eliminate all identified illicit discharges in accordance with the County's Illicit Discharge Elimination Ordinance. Actions related to the following activities will be tracked and included in the County's Rule 13 Annual Report.

1.6.1 Illicit Discharge and Elimination Reporting

The inspectors responsible for outfall screening and identifying illicit discharges will maintain a database that documents all activities associated with the County's IDDE Plan ranging from mapping, outfall screening, source identification, and enforcement.

1.6.2 IDDE Education and Outreach

The County will rely on the Northwestern Indiana Regional Planning Commission (NIRPC) to educate public employees, businesses, and the general public within the MS4 area about the hazards associated with illicit discharges and the improper disposal of waste. NIRPC will provide relevant education through brochures, newsletters, website, newspaper articles, etc. as their Public Education and Outreach and Public Participation Program evolves.

1.6.3 Report-A-Polluter

To help facilitate the IDDE Plan, Lake County has implemented a Report-A-Polluter Program to field complaints from the public regarding illegal dumping, illicit discharges, poor erosion control, and other activities that negatively impact stormwater quality. Citizens have the

opportunity to submit such complaints by utilizing the electronic form on the Lake County Surveyor's Office Website or by visiting the office in person.

1.7 IDDE PLAN REVIEW AND UPDATE

Every five (5) years, the Lake County IDDE Plan will be reviewed for adequacy and accuracy and will be updated as necessary. The County will attempt to include relevant personnel in this review process.

APPENDIX 1 OUTFALL INFORMATION SHEET



MS4 ILLICIT DISCHARGE ASSESSMENT
 Lake County Surveyor's Office * 2293 North Main St. * Crown Point, IN 46307
 Phone: (219) 755-3745 * Fax: (219) 755-3750

Case ID#: _____
 Date: _____
 Inspector: _____
 Outfall ID#: _____

LOCATION DESCRIPTION

- Routine Evaluation
- Complaint Investigation

DRY WEATHER SCREENING

- Presence of Flow (during dry conditions)
- Observed Pollutant Discharging Describe _____
- Unusual Odor Describe _____
- Unusual Color Describe _____
- Pollutants in Nearby Upland Area Describe _____

MAINTENANCE NEEDED

- Remove Debris
- Repair Structure
- Remove Vegetation
- Remove Cross-connection
- Site Remediation/Pollutant Removal

TRACKING

- Dye Test Positive
- Photos Taken

WATER QUALITY TESTING

- Temperature (C°)
- Lead
- PCBs
- Ammonia-Nitrogen
- E. coli
- Macroinvertebrates
- Phenols
- pH
- Phosphorus
- Mercury
- Arsenic
- Turbidity

*Attach test results to this form

COMMENTS

CONCLUSION

- Further Investigation Required
- Issue Resolved
- Recommend Enforcement
- Refer to State and or Federal Authorities

NOTE: Violations were identified during an on-site inspection. FAILURE TO CORRECT DEFICIENCIES TO ESTABLISH COMPLIANCE WITHIN _____ CALENDAR DAYS WILL RESULT IN PROSECUTION FOR VIOLATIONS OF ORDINANCE # 79-31. State and federal regulatory agencies may also be notified for additional enforcement.

I have read this document, I understand its contents, and I have received a copy.

Responsible Party: (print)	(sign)
Phone:	Fax:
	Date:

APPENDIX 2 INDUSTRIAL FACILITIES LISTING

Industrial Facilities within the Lake County MS4 Jurisdictional Areas

SIC Code	Company	Property Address	City	State	Zip
42260000	Dyer Self Storage	14974 W 101st Ave	Dyer	IN	46311-3030
50930000	Illiana Scrape & Core Inc	9220 Sheffield Ave	Dyer	IN	46311-2922
41190103	Access Limousine	6257 W 88th Ave	Crown Point	IN	46307-5176
23940000	Lakefront Canvas Marine LLC	913 W 126th Ct	Crown Point	IN	46307-9251
25410304	Ridge Home Equipment Co	12216 Kingfisher Rd	Crown Point	IN	46307-4287
27520000	Intercontinental Printing	3709 W 122nd Pl	Crown Point	IN	46307-8402
32319902	Susan Waddle	7420 W 83rd Ln	Crown Point	IN	46307-9564
38239901	Advanced Boiler Control Svcs	8730 Cline Ave	Crown Point	IN	46307-9623
39930000	North Star Signs Inc	9117 Fairbanks St	Crown Point	IN	46307-8854
41110301	Mdb Transfer Inc	14525 Reeder Rd	Crown Point	IN	46307-9742
42120000	Focus Trucking Inc	6832 W 86th Ct	Crown Point	IN	46307-8143
42120000	Howard Trucking	14723 King St	Crown Point	IN	46307-9746
42120000	Macias Trucking	7130 W 86th Pl	Crown Point	IN	46307-8120
42120000	Maybaum Trucking & Leasing LLC	10503 Lane St	Crown Point	IN	46307-2830
42120000	Saul Arellano	7899 W 84th Pl	Crown Point	IN	46307-9050
42120000	SBRB Trucking - Corp	6960 W 85th Ave	Crown Point	IN	46307-8127
42129905	Zygmunt Slempl	6852 W 85th Ct	Crown Point	IN	46307-8121
42130000	Signs Overnite Inc	8304 Cline Ave	Crown Point	IN	46307-9612
42150000	Contrak Courier Inc	11425 Lakewood St	Crown Point	IN	46307-9089
27410000	Information Exchange Publg	9593 Henry St	Dyer	IN	46311-2888
42120000	Good Service Trucking Inc	9100 Henry St	Dyer	IN	46311-2854
23890104	American Legion Post 367 Inc	3926 Wright Cir	Gary	IN	46408-1830
24510000	Ramona's Medical Supply	4809 W 41st Ave	Gary	IN	46408-3020
27590602	Paramount Printing Ltd Inc	2400 W 47th Ave	Gary	IN	46408-4102
32720302	Wilbert Calumet Vault Co Inc	1920 W 41st Ave	Gary	IN	46408-2399
34410000	Griffith Machine & Fabricating	3750 W 47th Ave	Gary	IN	46408-4042
35319903	P&Stowing	5301 W Ridge Rd	Gary	IN	46408-1714
35630102	W & W Manufacturing Co Inc	4520 Cleveland St	Gary	IN	46408-3715
36639901	T-Square Inc	4719 Roosevelt St	Gary	IN	46408-3747
40110000	Steven Richardson	2560 Ranburn Dr	Gary	IN	46408-2365
41510000	First Student Inc	2323 W 47th Ave	Gary	IN	46408-3642

SIC Code	Company	Property Address	City	State	Zip
41510000	Keep Buses Rolling	4220 Ellsworth St	Gary	IN	46408-2377
50130119	Herschel Brewer Inc	3964 Wright Cir	Gary	IN	46408-1830
42120000	Carl Albert Cadman	4408 Hayes St	Gary	IN	46408-3112
42129905	P & C Trucking Enterprises Inc	4410 Ross Rd	Gary	IN	46408-3031
42129905	Vonda's Trucking Inc	4410 Ross Rd	Gary	IN	46408-3031
42130000	Lika Trucking Repair	3635 W Ridge Rd	Gary	IN	46408-1841
27520000	Amerizip Printing	1104 E Highway 330	Griffith	IN	46319-3429
29510201	Walsh & Kelly Inc	1700 E Main St	Griffith	IN	46319-2918
35490300	Gary Machinery LLC	1931 E Main St	Griffith	IN	46319-2921
42120000	Omega Trucking Co Inc	1700 E Main St	Griffith	IN	46319-2918
42120401	Ray's Movers Inc	311 N Colfax St	Griffith	IN	46319-2849
42129903	B & J Steffan Truckng	1307 E Highway 330	Griffith	IN	46319-3432
42130000	Jamie Express Inc	209 N Colfax St Bldg 2	Griffith	IN	46319-2801
42250000	Omega Steel & Contractor Sply	1640 E Main St Frnt	Griffith	IN	46319-2943
45810301	Niemeyer Aviation Inc	3600 N Lake Park Ave	Hobart	IN	46342-1244
42250000	Sky Flying Ranch Storage Inc	3600 N Lake Park Ave	Hobart	IN	46342-1244
27410000	Echo Publications	15863 Stevenson Pl	Lowell	IN	46356-1005
39999927	Magnum Feeders Inc	5004 White Oak Ter	Lowell	IN	46356-1154
42120000	Terry Werts Jr	16211 Mount St	Lowell	IN	46356-1546
42129903	Florida Fruit Jucies	737 S Lakeview Dr	Lowell	IN	46356-1337
42130000	Carley's Moving & Storage	5260 Cleveland St	Merrillville	IN	46410-1136
42130000	Powell Moving & Storage Inc	5260 Cleveland St	Merrillville	IN	46410-1136
23950200	Dowell, Deborah & Robert Hall	8803 W 85th Ave	Schererville	IN	46375-2513
42259901	Keep Safe Storage	5048 W 81st Ave	Schererville	IN	46375-3336

**Source: Indiana Chamber of Commerce, Dunn & Bradstreet Registration Listing*