



Illicit Discharge Detection and Elimination (IDDE) Plan

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1.0 Introduction

1.1 *Illicit Discharge Detection and Elimination*

The illicit discharge detection and elimination minimum control measure (MCM) requires a Municipal Separate Storm Sewer (MS4) permittee to develop and implement a strategy to detect and eliminate illicit discharges to the MS4 conveyance. (327 IAC 15-13-14 (a))

The Indiana Department of Transportation (INDOT) is committed to ensuring that storm water runoff from its roadways and facilities complies with federal and state regulatory requirements. Storm water runoff is rainwater and melted snow that runs off the surface of streets, lawns, farms and construction and industrial sites. An illicit discharge is composed of non-storm water waste.

The IDDE program must incorporate three elements (327 IAC 15-13-14):

- 1) Develop a storm sewer system map showing the location of all outfalls and MS4 conveyances in the MS4 area under the operators control and the locations of all receiving waters (327 IAC 15-13-14 (b));
- 2) Establish procedures to prohibit illicit discharges into MS4 conveyances and establish appropriate enforcement procedures and actions to the extent allowable under state law (327 IAC 15-13-14 (c)); and
- 3) Develop a plan to detect, address, and eliminate illicit discharges, including illegal dumping into the MS4 conveyances (327 IAC 15-13-14 (d)).

Components of the plan include:

- Problem area location through dry weather screening or other means, source determination, removal or correction of illicit connections, and documentation (327 IAC 15-13-14 (e));
- Identification of all active industrial facilities within the MS4 area that discharge into an MS4 conveyance (327 IAC 15-13-14 (f));
- Education program for public employees, businesses, and the general public about the hazards associated with illicit discharges and improper disposal of waste to include information brochures and guidance and publicizing and reporting of illicit discharges and spills (327 IAC 15-13-14 (h));
- The initiation and coordination of existing recycling programs for commonly dumped wastes within MS4 area (327 IAC 15-13-14 (i)); and
- Measurable goals for implementation (327 IAC 15-13-14 (j)).

1.2 *Illicit Discharge Definition*

EPA's guidance manual, *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments (2004)*, breaks the definition of illicit discharge into four parts:

1. A storm drain that has measurable flow during dry weather containing pollutants and/or pathogens. A storm drain with measurable flow but no pollutants is a non-illicit discharge.

2. A discharge that has a unique frequency, composition and mode of entry into the storm drain system.
3. A discharge may be caused by the interaction of sewage disposal and storm drain systems.
4. A discharge may be produced from known source areas and operations known as “generating sites.”

The State of Indiana defines an illicit discharge as any discharge to an MS4 conveyance that is not composed entirely of storm water, except naturally occurring floatables, such as leaves or tree limbs. 327 IAC 15-13-5 (26).

The U.S. Environmental Protection Agency (EPA) defines an illicit discharge in 40 CFR § 122.26 (b)(2) as

any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from firefighting activities.

1.3 Illicit Discharge Examples

Illicit discharges include:

- Sanitary wastewater from showers, washing machines, sinks, etc.;
- Discharge of oil and fuel from vehicles and equipment, to include improper disposal of used products;
- Fertilizer, pesticides and herbicides that are missapplied or overapplied;
- Cooking oil and grease;
- Grass clippings and leaves when intentionally blown into drains;
- Solvents;
- Cleaning chemicals;
- Paints;
- Mismanaged/excess road salt;
- Sediment;
- Nonresidential vehicle wash water;
- Improper disposal of fluids; and
- Septic/sanitary sewer discharges.

An illicit discharge also includes illicit connections. An illicit connection occurs when drainage pipes or other conveyances are improperly connected to the storm drain system. The improper connections are often a source of illicit discharge. Illicit connections includes:

- Sewer pipes improperly connected to a storm sewer that is discharging untreated sewage;

- Floor drains connected to the storm sewer system; and
- Pipes from a residence discharging gray water into the storm sewer system.

Another common type of illicite discharge is illegal dumping. This consists of the disposal of solid wastes in an unpermitted area, the pouring of liquid wastes or placement of trash into a storm drainage system, and blowing or sweeping of landscape debris into a public right-of-way (ROW) or a storm drainage system.

1.4 Non-Storm Water Discharges or Flows

The following categories of non-storm water discharges or flows do not have to be addressed in the plan unless they are a significant contributor of pollutants (312 IAC 15-13-14 (d)):

- Water line flushing;
- Landscape irrigation and lawn water;
- Diverted stream flows;
- Groundwater;
- Discharges from a potable water source;
- Water from foundation or footing drains;
- Air conditioning condensation;
- Agricultural irrigation water;
- Springs;
- Basement or crawl space sump pump water;
- Individual residential car wash water;
- Flows from riparian habitat or wetlands;
- Declorinated swimming pool discharges;
- Street wash water; and
- Discharges from fire fighting activities.

1.5 Other Definitions

1.5.1 Conveyance

A conveyance is any structural process for transferring storm water between at least two points. It includes pipes, ditches, swales, curbs, cutters, catch basins, channels storm drains, and roadways. (327 IAC 15-13-5 (9))

1.5.2 Discharge Frequency

Dry weather discharges can be *continuous*, *intermittent* or *transitory*. *Continuous* discharges occur most or all of the time and are usually easier to detect. They typically produce the greatest pollutant load. *Intermittent* discharges occur over a short period of time (a few hours per day or days per year) which makes them difficult to detect. *Transitory* discharges occur rarely and are usually the result of a single event such as an industrial spill, ruptured tank, sewer break, transport accident or illegal dumping incident. (CWP, p. 6)

1.5.3 Mode of Entry

The mode of entry refers to how an illicit discharge enters the storm drain system. A *direct* mode of entry means that the discharge is connected directly to the storm drain pipe through another type of pipe. This type of entry will produce continuous or intermittent discharges. These will occur through sewage, industrial or commercial cross-connections or straight pipe. An *indirect* mode of entry means that flows generated outside the storm drain system enter through storm drain inlets or by filtering through the joints of the pipe. This type of entry will produce intermittent or transitory discharges, except for ground water seepage. The other types of entry are spills, dumping, outdoor washing activity and non-target irrigation. (CWP, p. 7)

1.5.4 Outfall

An outfall is a point source discharge through a conveyance of storm water run-off into a water of the state. 327 IAC 15-13-5 (26) The IDEM Storm Water Quality Manual defines an outfall as the point, location, or structure where wastewater or drainage discharges from a sewer to a receiving body of water.

The EPA defines an outfall as

a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. 40 CFR § 122.26 (b)(9)

The EPA defines a point source as

any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include flows from irrigated agriculture or agricultural storm water runoff. 40 CFR § 122.2

The EPA defines a major municipal separate storm sewer outfall or major outfall as one 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 circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water 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 area of 2 acres or more). 40 CFR § 122.26 (b)(5)

1.5.5 Storm Drain

A *storm drain* can be an enclosed pipe or an open channel. *Major storm drains* are enclosed storm drain pipes with a diameter of 36 inches, or greater or open channels that drain more than 50 acres. In industrial areas a major storm drain is an enclosed storm drain pipe with a diameter of 12 inches or greater and open channels that drain more than two acres. A *minor storm drain* is smaller than these thresholds. (CWP, p. 6)

2.0 IDDE Plan Coverage and Authorities

2.1 *INDOT MS4 Structure and IDDE Plan Coverage*

INDOT is an MS4 under Indiana law (327 IAC 15-13). INDOT's MS4 includes roadways, such as interstates, U.S. routes, and state roads, and buildings and grounds, such as rest areas, district offices, and maintenance and operations facilities. INDOT's MS4 does not include roadways operated by local units of government, private roadways, state-owned roadways outside of other MS4 limits, or the Indiana Toll Road.

This IDDE plan will cover INDOT's roadways within another MS4 entity and buildings and grounds statewide. INDOT is responsible for 11,169 highway centerline miles. Only a small portion, 4,844 miles, pass through another designated MS4. Thirty-nine of the 93 Indiana counties do not contain an MS4. Of the counties that do contain MS4s there is a wide range of centerline miles. Randolph County has one MS4, Parker City, with only 0.378 centerlines miles while Porter County has 579 centerline miles. See Figure 1 the Indiana MS4 Area and INDOT facilities map.

2.2 *INDOT Authority*

INDOT receives information about conditions in the right-of-way from state and local law enforcement and emergency response personnel, INDOT maintenance staff, roadway users, neighboring landowners, contractors, and consultants. INDOT is not a traditional MS4 in that INDOT does not have the ability to prohibit illegal dumping through ordinances or other regulatory mechanisms. Through the right-of-way permitting process, the agency does have the ability to control the use of right-of-way and legal remedies for encroachments on INDOT right-of-way are available. The INDOT IDDE plan relies on cooperation with state agencies with enforcement authority and adjacent MS4s with local ordinances.

INDOT's rule-making authority is limited to what relates to our mission to plan, build and maintain safe and innovative transportation infrastructure. The provisions of the encroachment statute can apply to storm water encroachments. INDOT's response is to provide a letter to the property owner and post a notice on-site for 30 days requiring the encroachment to be removed and INDOT's follow-on activity if it is not. If not remedied by the end of the 30 days, INDOT will remove the encroachment and bill the property owner.

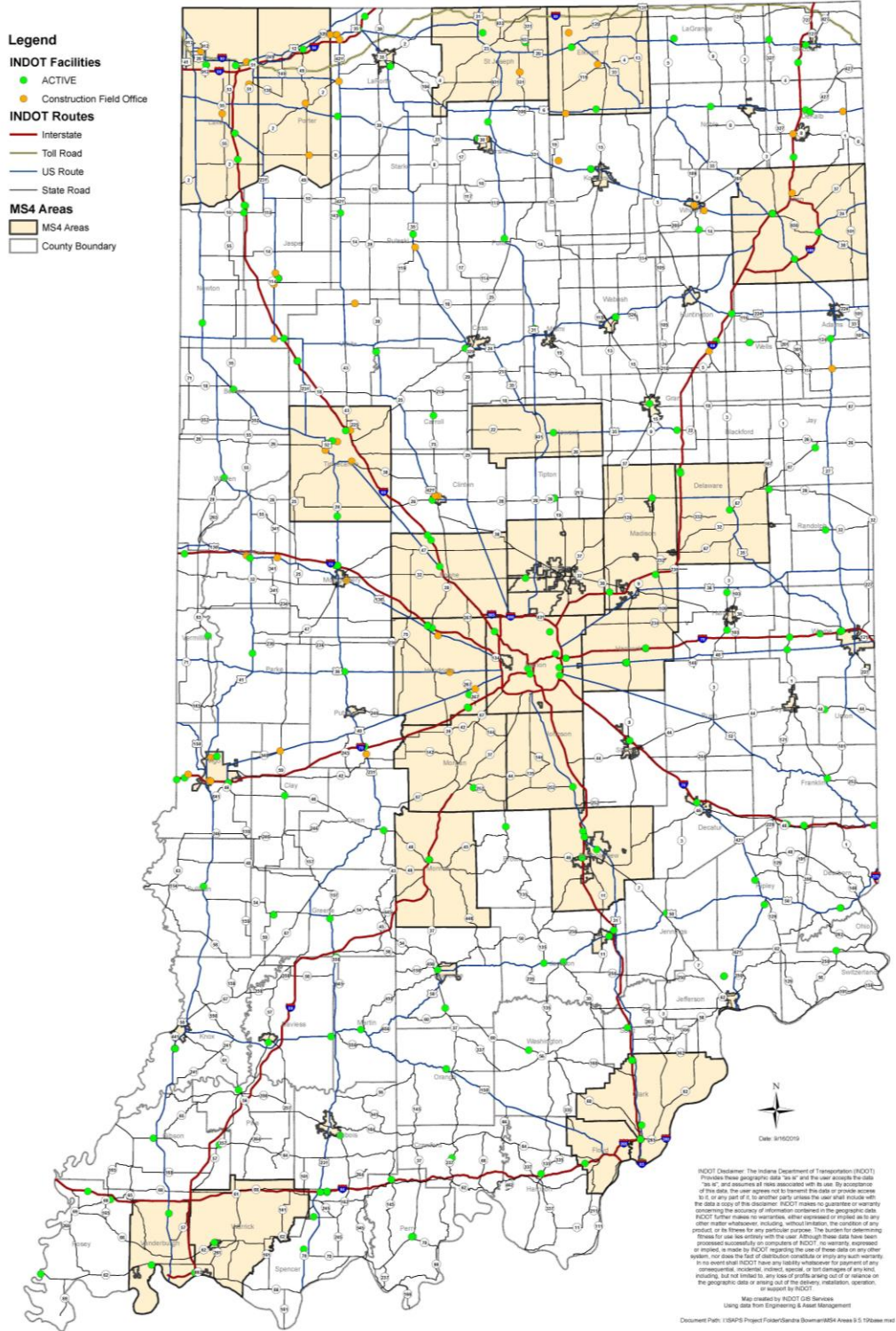


Figure 1. MS4 Areas in Indiana and INDOT Facilities

INDOT also has the ability to make a tort claim. The Attorney General represents all state agencies in these claims.

3.0 IDDE Program Components

There are eight IDDE program components. Each component, and INDOT implementation of the component, is described below.

3.1 Audit Existing Resources and Programs

This component consists of the review of existing resources, regulations and responsibilities as it relates to illicit discharge. It will define the needs and capabilities and will set the foundation for the program.

INDOT has reviewed existing resources and programs with respect to IDDE requirements. Sufficient processes are in place for most plan components and the balance can be secured through contracts.

INDOT is conducting an inventory of all pipes, culverts, and outfalls within the INDOT right-of-way.

3.2 Establish Responsibility, Authority and Tracking

This component consists of finding the right “owner” of the program within the agency. It includes establishing the legal authority to regulate illicit discharges, creation of a tracking system to report illicit discharges, suspect outfalls, citizen complaints, and documentation of response efforts.

INDOT’s IDDE program will be implemented through various functions within Operations with oversight and support from the Environmental Services Division.

3.3 Complete Desktop Assessment of Illicit Discharge Potential

This component develops methods to identify the most severe illicit discharge problems based on land use, watershed, infrastructure and other information for the area to include results of previous water monitoring.

INDOT will perform an analysis, based on the following factors, to determine high-risk locations within the IDDE plan coverage area. These factors may include:

- 1) Watershed analysis
- 2) Proximity to high quality resources
- 3) Past dry weather flow
- 4) Past discharge complaints and reports
- 5) Age of nearby development
- 6) Density of aging septic systems
- 7) Aging or failing sewer infrastructure
- 8) Density and age of industrial activities
- 9) Presence of sump pumps associated with removal of water from roadways

- 10) Proximity to Wellhead Protection Areas designated under 327 IAC 8-4.1
- 11) Proximity to Community Public Water Supply System designated under 327 IAC 8-3.4
- 12) Proximity to DNR Significant Withdrawal Wells <https://www.in.gov/dnr/water/3595.htm>
- 13) Proximity to St. Joseph Sole Source Aquifer
- 14) Located within another designated MS4
- 15) Wellhead Protection Areas designated under 327 IAC 8-4.1
- 16) Community Public Water Supply System designated under 327 IAC 8-3.4
- 17) DNR Significant Withdrawal Wells <https://www.in.gov/dnr/water/3595.htm>
- 18) Other areas of concern identified through coordination with the adjacent MS4
- 19) Outfall size

3.4 Develop Program Goals and Implementation Strategies

The development of measurable program goals and implementation strategies is based off the analysis of the first three components. INDOT's IDDE program goals are:

- 1) Audit existing resources and programs by 12/31/2019.
- 2) Develop coordination guidance for operations implementation of IDDE program by 3/31/2020.
- 3) Complete screening of 20% of targeted storm water outfalls by 3/31/2021. Screen an additional 20% each year.
- 4) Include illicit discharges in INDOT instructions to field staff by 6/30/2020.
- 5) Develop IDDE education brochure by 6/30/2020.
- 6) Complete desktop assessment of illicit discharge potential by 9/30/2020.
- 7) IDDE Program evaluation will be included in INDOT's MS4 permit annual report.

3.5 Field Identification and Testing of Potential Illicit Discharges

INDOT will identify and test potential illicit discharges. Although outfall testing and dry weather screening is the method advocated for use by MS4s (see below), INDOT may opt to use other data sources to identify potential illicit discharges. INDOT will consult with IDEM on any alternative field identification and testing program.

Should INDOT elect to identify potential illicit discharges through dry weather screening, INDOT will screen outfalls identified through the factor analysis described in section 3.3. Storm water outfalls with pipes greater than twenty-four (24) inches in diameter will be screened. IC 8-1.5-5-28 Outfalls with a diameter of 24 inches or less will be screened if they are related to a previously discovered potential illicit discharge.

Where testing is warranted, the discharge will be tested for the following parameters: BOD/cBOD, chloride, residual chlorine, color, total coliforms, fluoride, total hardness, ammonia nitrogen, nitrate &

nitrite nitrogen, dissolved oxygen, pH, total phosphorus, total dissolved solids, specific conductance, sulfate, surfactants, turbidity, and water temperature. See Appendix C for the IDDE testing list.

INDOT will retain a contractor to perform field investigations and sampling.

3.5.1 Dry-Weather Screening

The EPA considers dry weather screening an effective method for identifying illicit discharges and connections. INDOT will perform dry weather screening within the area covered by this IDDE plan. The standard time period for dry weather screening is at least 72 hours after the most recent rain event. Any major outfall observed to be flowing during dry weather screening is investigated as a potential illicit discharge. The INDOT sampling protocol was developed in accordance with EPA's guidance manual, *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*. Standard operating procedures to identify outfalls with dry-weather flow and sampling procedures include but are not limited to the following:

- Conduct dry weather screening at least 72 hours after a rain event.
- Each field crew shall consist of two or more technicians with safety equipment, to include safety vest, steel toe boots, rain boots or waders, and long sleeves if the area is densely vegetated. Sunscreen and bug spray should also be used when needed.
- Field investigate each creek, stream or water body located in the right-of-way (ROW) or on INDOT owned grounds to identify outfalls with flow.
- Record the outfall coordinates (latitude and longitude) and outfall characteristics on the data collection form.
- Conduct an initial field sampling/analyses to determine if the flow is from a natural source or an illicit discharge. Record concentrations for parameters listed on the data collection form.
- If the discharge is determined to be illicit based on the field sampling, analyses and indicators, classify the discharge as a sanitary or non-sanitary illicit discharge. The presence of *E. coli* is a strong indicator of a sanitary sewer illicit discharge. If the classification is unclear from field analyses, collect, preserve, store on ice, and deliver a sample to an analytical laboratory for *E. coli* analysis within six (6) hours (allowable hold time). A Chain of Custody form shall document the collection time, date, and receiving location for testing.
- If full-scale chemical analyses are required to confirm an illicit discharge, then collect, preserve, store on ice, and deliver a sample to an analytical laboratory within the appropriate hold time.
- If hazardous discharges or other discharges are encountered that could affect health and safety, evacuate the area, and immediately notify emergency response agencies. Maintain a safe distance from the area.
- Coordinate with the local MS4 on findings.

3.6 *Isolate and Resolve Individual Dischargers*

3.6.1 General Procedures

Illicit discharges may be reported by many different parties, including the general public, INDOT staff, consultants, contractors, and other state agencies. Appendix D includes the IDDE Intake Flow Chart and IDDE Problem Evaluation flow chart that provides guidance to INDOT staff and contractors on the appropriate response to reported discharges. Reports are primarily taken by INDOT's customer service unit, with other intake via the MS4 Coordinator and various activity-specific applications, such as INDOT's asset management inventory system, INDOT's maintenance deficiency application, or applicable Storm Water Pollution Prevention Plans (SWPPPs). These reporting paths each have an evaluation point from which possible illicit discharges are routed for investigation and resolution. Reports are prioritized for resolution by type and location, and INDOT's MS4 Coordinator is available to assist in evaluations. Emergency discharges that are within INDOT's ROW, such as spills from vehicles, are reported to INDOT's Traffic Management Center (TMC), which in turn reports emergencies to IDEM's spill line and the Indiana State Police.

Non-emergency discharges discovered in INDOT's ROW and on other INDOT property will be addressed through INDOT's encroachment remedies (see 3.6.2 below) or through maintenance activities, and sanitary waste discharges will be referred to the local health department for resolution. Illicit discharges that are reported but are discovered to be not on INDOT property will be reported to the adjacent local MS4.

INDOT's ROW permit staff inform permittees of allowable discharges. ROW permit staff also perform inspections related to issuing and closing ROW permits and report environmental concerns to the applicant and INDOT's customer service line for resolution.

Contaminated material discovered during active construction within INDOT ROW is addressed through procedures in the contract documents, as shown in the flow diagram in Appendix D.

3.6.2 INDOT's Encroachment Resolution Process

Discharges that constitute an encroachment will be identified to the closest possible source upstream and INDOT will require the property owner to remedy the encroachment.

An encroachment includes discharges that are on or extend onto a state highway right-of-way, or other INDOT property. A discharge that has not been permitted through the right-of-way permit process will be evaluated and action taken in accordance with the INDOT right-of-way permit manual. INDOT may remove, prevent, or terminate an encroachment pursuant to the legal authority granted in IC 8-23-5-1. After all reasonable alternatives have been exhausted to remove the encroachment, INDOT will provide notice by certified mail to the owner and occupant of the property where the encroachment occurred and post a visible notice on the property. The steps are as follows:

1. Verify status of encroachment through determination of property ownership and limits of INDOT right-of-way or property.
2. Verify ownership and occupant information of adjacent property.
3. Determine appropriate course of action and alternatives to remedy the encroachment.
4. Advise the property owner and occupant of the alternatives.

5. When the property owner and occupant have failed to remedy the encroachment, take action pursuant to IC 8-23-5-1.
 - a. Orally advise the owner and occupant to terminate the encroachment, restore the right-of-way to the original condition, or provide a plan for removal within ten (10) days.
 - b. Follow up conversation with a letter sent by certified mail to the property owner and occupant the following day to document the discussion.
 - c. After 10 days without remedy, a completed Notice of Right-of-Way Encroachment form is sent to the property owner and occupant with a minimum of 30 days to comply. In addition, a copy of the notice must be posted on the property.
 - d. After the notice period has expired without removal INDOT is authorized to remove or terminate the encroachment. The property owner will be required to reimburse the state for the cost of removal.

An INDOT ROW permit is required to conduct environmental cleanup. The bond amount requested must be sufficient to cover the amount of work and that emergency permit requirements must be adhered to if the cleanup begins as an emergency. Applicants should be sure to comply with all general permit requirements that apply as well as the requirements for an INDOT environmental cleanup permit.

Permittees seeking permits will comply with all applicable general permit provisions in Section 3.0 of the INDOT Permit Guidelines, available on INDOT's public web site.

3.6.3 Notification of Contaminated Sites Adjacent to INDOT Property

In some instances, a contaminated site adjacent to INDOT property may have impacted media that extends onto INDOT property and the contamination may not be able to be addressed during remediation activities. If the risk associated with the site is low, IDEM may approve the application of an institutional control on the deed of the property which places restrictions on the use of the property.

INDOT Site Assessment & Management (SAM) has an internal ArcGIS layer called Notice of Contamination sites, which is updated as these letters are received. SAM staff are available to provide advice on resolution approaches for contamination that originates off INDOT property. For expenses incurred by INDOT to remediate contamination located along our right-of-way, INDOT will pursue reimbursement from the responsible party for reasonable and necessary expenses relating to the contamination.

3.6.4 Identifying and Mapping Industrial Dischargers

IDEM's Office of Water Quality (OWQ) will be the source of data for industrial discharge permit holders and industrial facilities with no storm water discharge exposure. This data will be mapped on a GIS layer and will be updated annually. The layer created from industrial discharge permit holder's data obtained in May 2019 is provided in Figure 2.

This layer is a component of the desktop assessment described in 3.3 above. INDOT will determine during this assessment whether industrial discharger location data is useful for determining illicit discharge potential.

The industrial discharge layer will be used when tracing the source of pollutants found during field identification as described in 3.6 above. The data will also be used to generate the list of recipients for the educational component of the IDDE program.

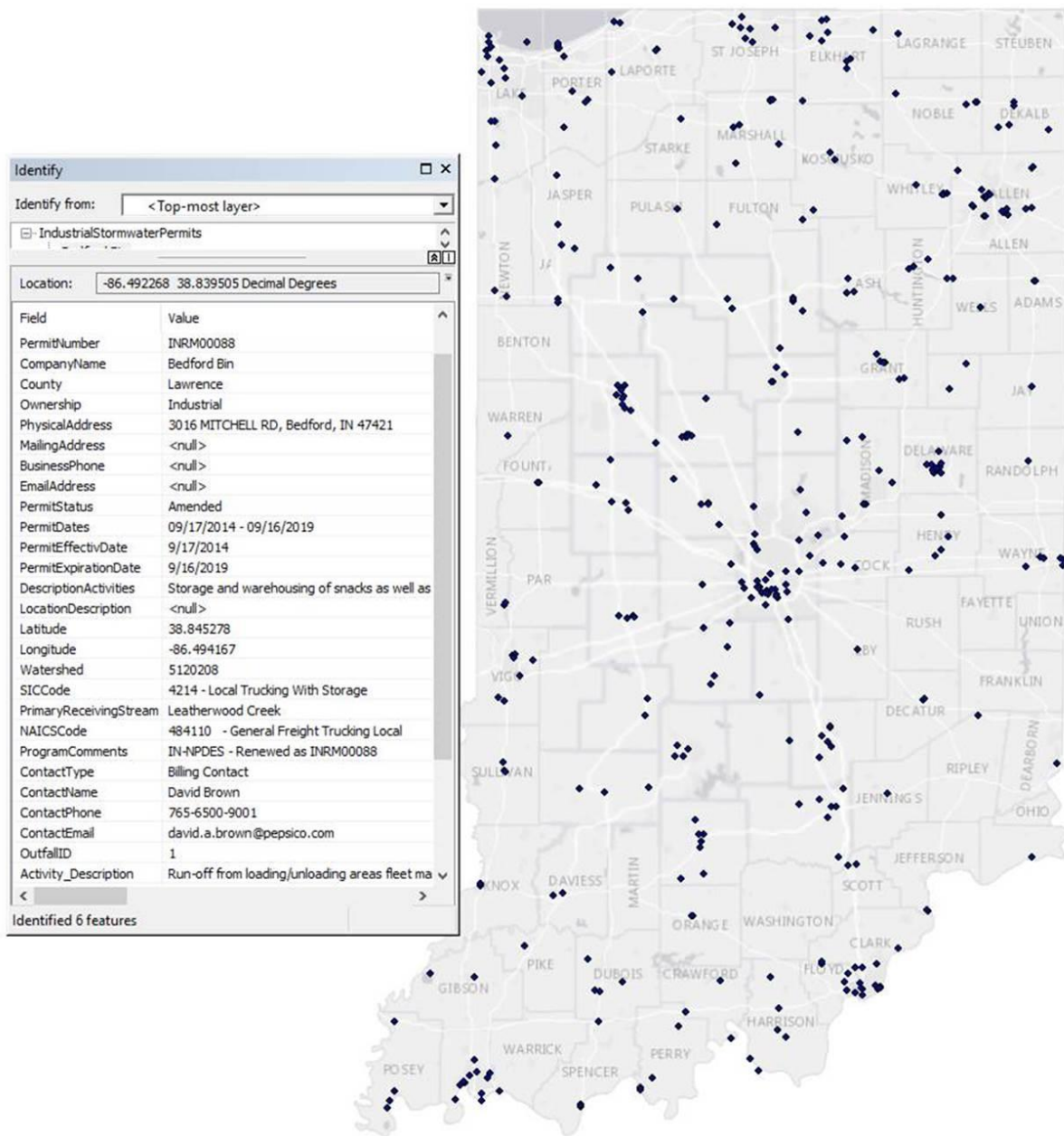


Figure 2. Industrial Dischargers Map (IDEM data as of May 2019)

3.7 Prevent Illicit Discharges

This component uses education and right-of-way encroachment legal remedies to reduce discharges from residential, commercial and industrial facilities. INDOT will provide a brochure on IDDE at rest areas

and public events, similar to our existing storm water brochure. INDOT will also provide educational materials to industrial dischargers and adjacent landowners on an as-needed basis. In addition, INDOT will contact the ROW permit holders and provide information on the IDDE program, to include allowed discharges, unpermitted discharges and required remedies.

INDOT will not design or permit discharges to or from ROW or buildings and grounds that violate water quality standards.

3.8 Evaluate the Program

This includes the periodic evaluation of program goals and implementation strategies.

INDOT will evaluate the effectiveness of the IDDE program at least annually and include this evaluation in our MS4 permit annual report.

Appendix A. References

Center for Watershed Protection and Robert Pitt. Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments. October, 2004. [CWP]

Environmental Protection Agency, Office of Wastewater Management, Transportation Stormwater Permit Compendium, EPA-833-R-18-001, August, 2018.

National Academies of Sciences, Engineering, and Medicine 2019. *Approaches for Determining and Complying with TMDL Requirements Related to Roadway Stormwater Runoff*. Washington, DC: The National Academies Press.

United States Environmental Protection Agency. NPDES Storm Water Sampling Guidance Document. EPA 833-B-92-001, July 1992.

Appendix B. Glossary and Abbreviations

Conveyance. Any structural process for transferring storm water between a least two (2) points. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains and roadways. 312 IAC 15-13-5 (9)

Illicit discharge. Any discharge to an MS4 conveyance that is not composed entirely of storm water, except naturally occurring floatables, such as leaves or tree limbs. Sources of illicit discharges include sanitary wastewater, septic tank effluent, car wash wastewater, oil disposal, radiator flushing disposal, laundry wastewater, roadway accident spillage and household hazardous wastes. 312 IAC 15-13-5 (26)

any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from firefighting activities. 40 CFR § 122.26 (b)(2)

Minimum control measure. Refers to the following minimum control measures: (A) public education and outreach; (B) public participation and involvement; (C) illicit discharge detection and elimination; (D) construction site run-off control; (E) post-construction run-off control; and (6) pollution prevention and good housekeeping. 312 IAC 15-13-5 (37)

Municipal separate storm sewer system. A conveyance or system of conveyances, including roads with drainage system, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains, that is:

(A) owned or operated by a:

- (i) federal, state, city, town county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over storm water, including special districts under state law such as a sewer district, flood control district, or drainage district, or similar entity, or a designate and approved management agency under Section 208 of the Clean Water Act (33 U.S.C. 1288) that discharge into waters of the state; or
- (ii) privately owned storm water utility, hospital, university, or college having jurisdiction over storm water that discharges into waters of the state;

(B) designed or used for collecting or conveying storm water;

(C) not a combined sewer; and

(D) not part of a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.

312 IAC 15-13-5 (41)

Nonpoint source. A source of water pollution that does not meet the definition of point source. The term includes in-place pollutants, direct wet and dry deposition, ground water inflow, and overland runoff. 312 IAC 15-13-5 (44)

Outfall. A point source discharge via a conveyance of storm water run-off into a water of the state. 312 IAC 15-13-5 (50)

a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. 40 CFR § 122.26 (b)(9)

Point source. Any discernable, confined, and discrete conveyance, including a pipe, ditch, channel, tunnel, conduit, well, or discrete fissure. 312 IAC 15-13-5 (52)

any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include flows from irrigated agriculture or agricultural storm water runoff. 40 CFR § 122.2

Pollutant of concern. Any pollutant that has been documented via analytical data as a cause of impairment in any waterbody, or to another MS4, to which the MS4 discharges. 312 IAC 15-13-5 (53)

Receiving stream or receiving water. A waterbody that receives a discharge from an outfall. The term does not include private drains, unnamed conveyances, retention and detention basins, or constructed wetlands used as treatment. 312 IAC 15-13-5 (59)

Responsible individual. The person responsible for development, implementation, or enforcement of the MCMs for a designated MS4 entity. 312 IAC 15-13-5 (61)

Responsible party. For purposes of IC 13-25-6, means a person:

- (1) who:
 - (A) owns hazardous material that is involved in a hazardous materials emergency; or
 - (B) owns a container or owns or operates a vehicle that contains hazardous material that is involved in a hazardous materials emergency; and
- (2) who:
 - (A) causes; or
 - (B) substantially contributes to the cause of;the hazardous materials emergency. IC 13-11-2-191 (e)

Sensitive area. A waterbody identified as needing priority protection or remediated based on:

- (A) having endangered or threatened species or their habitat;
- (B) usage as a public surface water supply intake;
- (C) usage for full body contact recreation, such as bathing beaches; or
- (D) outstanding state resource water classification as found in 327 IAC 2-1-11(b), 327 IAC 2-1.3-3(d), and 327 IAC 2-1.5-19(b). 312 IAC 15-13-5 (68)

Spill. The unexpected, unintended, abnormal, or unapproved dumping, leakage, drainage, seepage, discharge, or other loss of petroleum, hazardous substances, extremely hazardous substances, or objectionable substances. The term does not include releases to impervious surfaces when the substance does not migrate off the surface or penetrate the surface and enter the soil. 312 IAC 15-13-5 (72)

Storm water. Storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR § 122.26 (b)(13)

Total Maximum Daily Load. The sum of the daily individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background minus the sum of a specified margin of safety and any capacity reserved for growth. A TMDL sets and allocates the maximum daily amount of a pollutant that may be introduced into a waterbody and still assure attainment

and maintenance of water quality standards,
13-5 (77)

312 IAC 15-

Wasteload allocation. The portion of a receiving stream's loading capacity that is allocated to one (1) of
its existing or future point sources of pollution. 312 IAC 15-13-5 (82)

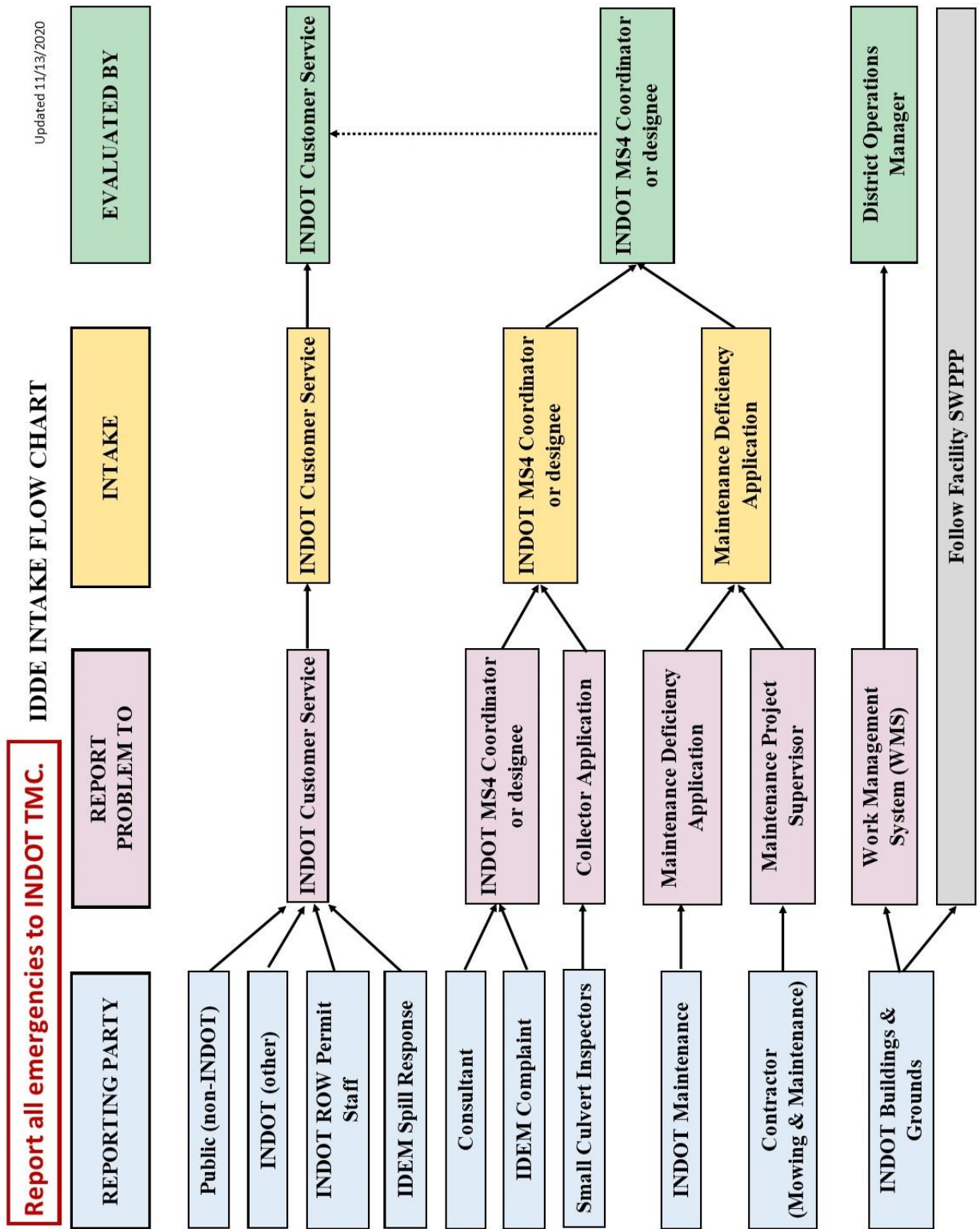
BOD	Biological Oxygen Demand
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
IAC	Indiana Administrative Code
IC	Indiana Code
IDDE	Illicit Discharge Detection and Elimination
LUST	Leaking Underground Storage Tank
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
POC	Pollutant of Concern
TMDL	Total Maximum Daily Load
UST	Underground Storage Tank
VFC	Virtual File Cabinet
WLA	Wasteload Allocation

Appendix C. IDDE Testing List

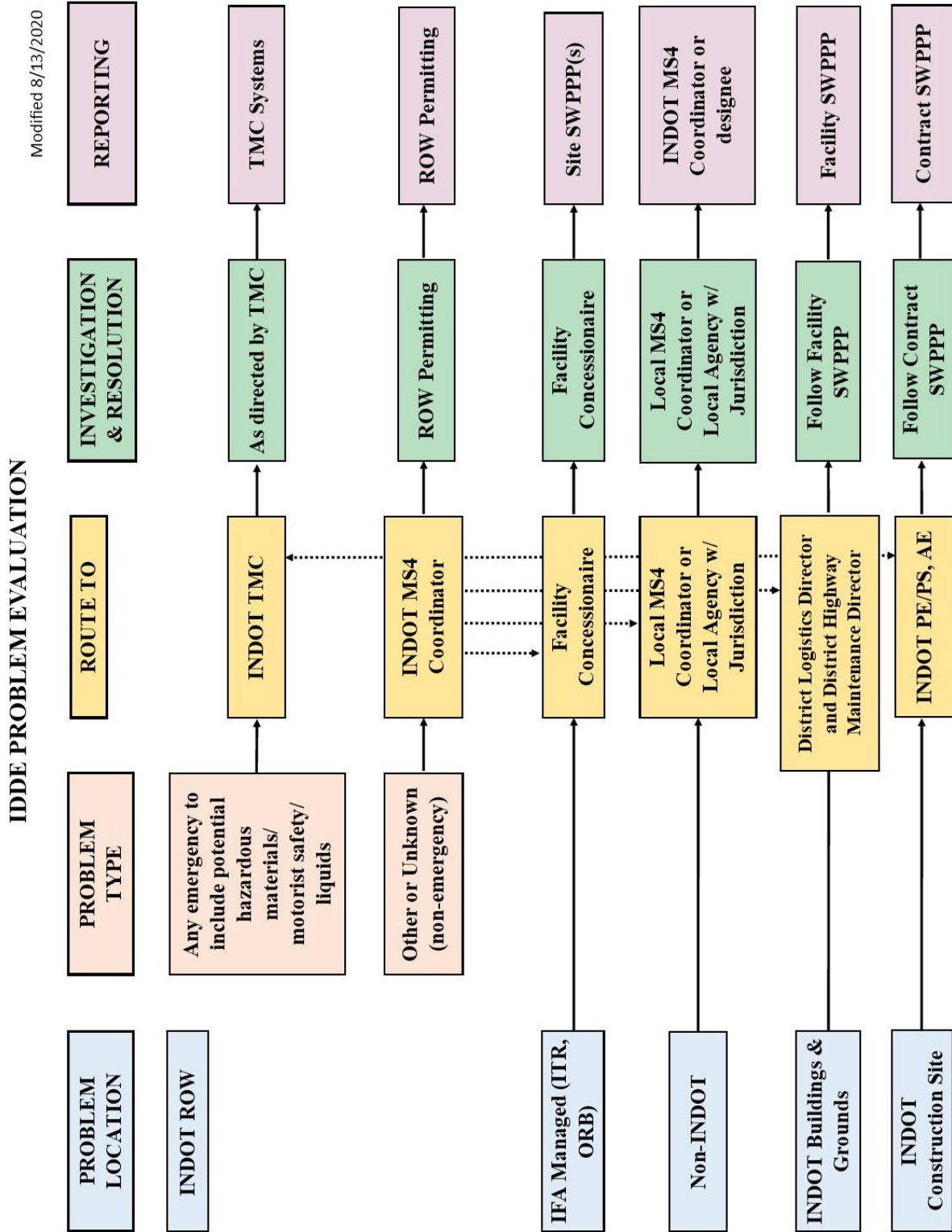
Parameter	Units	EPA Test Method	Typical Values	Sources/Influences on Water Quality
BOD/cBOD	mg/L	405.1	Range = 0 – 6.3 Average = 1.5	Animal wastes, decaying plants/leaves/grass, septic/sanitary, industrial
Chloride	mg/L	325.2/325.3	Range = 10 – 50 (groundwater) Standard = average < 230, never > 860	Road salting, septic/sanitary, natural (geology), industrial
Chlorine, residual	mg/L	330.1/330.5/ 330.2	Standard = average < 0.011, never > 0.019	Disinfectants/cleaning products (bleaches, pool disinfectants, algaecides), industrial
Coliforms, Total	cfu/100 mL	MICROBI	Range = 133 – 1,157 Average = 645 Standard = average < 125, never > 235	Animal wastes, septic/sanitary
Color		110.3/110.2		Suspended solids/particles, algae, industrial
Fluoride	mg/L	340.1/340.2	Range = 0.1 – 0.3 Standard = < 2.0	Irrigation, fire fighting runoff, soaps/detergents, fertilizers, pesticides, natural (geology), industrial
Hardness, Total (CaCO ₃)	mg/L	130.2/130.1	Range = 20 – 400 (groundwater)	Natural (geology), industrial
Nitrogen, Ammonia	mg/L	350.1/350.2/ 350.3	Standard = dependent	Fertilizers, cleaning products, animal wastes, septic/sanitary, natural (rainfall), industrial
Nitrogen, Nitrate & Nitrite	mg/L	353.2	Range = 0 – 36.08 Average = 12.32 Standard = < 10 Nitrate + Nitrite, < 1 Nitrite	Fertilizers, animal wastes, septic/sanitary, industrial
Oxygen, Dissolved	mg/L	360.1	Range = 5.4 – 14.2 Average = 9.8 Standard = average > 5, never < 4	Thermal pollution (higher T = lower DO), water turbulence (higher turbulence = higher DO), animal wastes, decaying plants/leaves/grass, septic/sanitary, industrial
pH		150.1/150.2	Range = 7.2 – 8.8 Average = 8.0 Standard = between 6.0 and 9.0	Acids, bases (pH change dependent on pH of discharged substance), natural (rainwater – slightly acidic, geology – slightly basic, decaying plants/leaves/grass – slightly acidic)
Phosphorus, Total	mg/L	365.1/365.2/ 365.4	Range = 0 – 0.85 Average = 0.05 Standard = < 0.30	Animal wastes, decaying plants/leaves/grass, soaps/detergents, fertilizers, pesticides, cleaning products, septic/sanitary, natural (geology), industrial
Solids, Total Dissolved	mg/L	160.1	Range = 50 – 650 Standard = < 750 for industrial water supply	Fertilizers, pesticides, road salting, natural (geology), industrial
Specific Conductance	µS/cm	120.1	Range = 100 – 1000 Standard = < 1,200 for industrial water supply	Thermal pollution, total dissolved solids, natural (geology)
Sulfate	mg/L	375.4/375.2	Range = 0 – 1000 (groundwater) Standard = dependent (see page 9 in SWQS)	Fertilizers, dyes, soaps/detergents, fungicides, insecticides, natural (geology), industrial
Surfactants	mg/L	425.1		Soaps/detergents, fabric softeners, paints, inks, herbicides, insecticides, shampoos/hair conditioners, dispersing agents, emulsifying agents, foaming agents

Parameter	Units	EPA Test Method	Typical Values	Sources/Influences on Water Quality
Turbidity	NTU	180.1	Range = 0 – 173 Average = 36	Sediment/suspended solids
Water Temp.	°C		Standard = dependent	Urban runoff from paved areas (roads, parking lots), natural (weather), industrial

Appendix D. IDDE Intake Flow Chart

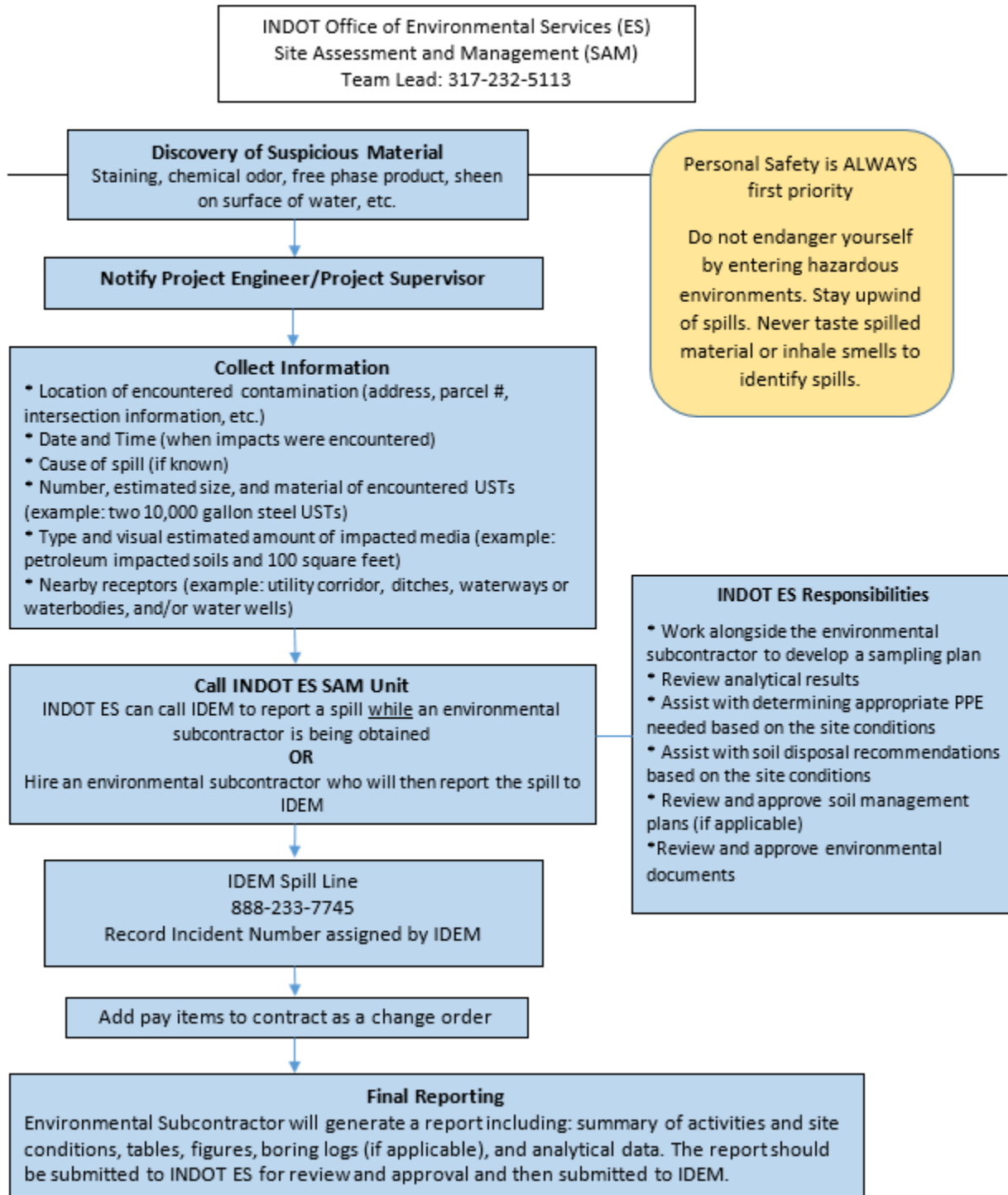


Appendix E. IDDE Problem Evaluation Flow Chart



Appendix F. Emergency Response

Discovery of Contaminated Materials or Unknown Underground Storage Tanks (USTs) in **INDOT Owned Right-of-Way**





INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Emergency Response Quick Reference SheetEric J. Holcomb
GovernorBruno L. Pigott
Commissioner

(317) 232-8603 • (800) 451-6027

www.idem.IN.gov

100 N. Senate Ave., Indianapolis, IN 46204

Contact numbers and evaluation techniques for environmental threats

PERSONAL SAFETY, ESPECIALLY YOURS, IS ALWAYS THE FIRST PRIORITY. Do not endanger yourself by entering hazardous environments. Stay upwind of spills and air releases. Never taste spilled materials. Never inhale smells to identify spills. Never touch unknown materials without proper Personal Protective Equipment. Be aware of highway, water and night- time safety issues. The burden of providing information and performing spill responses ALWAYS falls on the spiller, not you. Please let us know if you need additional guidance or do not feel comfortable being involved in a situation.

Contact Telephone Numbers

State Contacts:

IDEM Emergency Response, 24 hour spill reporting	888-233-7745
IDEM, general information	800-451-6027
IDEM, complaints	800-451-6027 ext. 2-4464
IERC (Indiana Emergency Response Commission)	317-232-4679
ISFM (Indiana State Fire Marshal)	317-232-2222
ISDH (Indiana State Department of Health)	800-382-9480
IDNR (Indiana Department of Natural Resources), customer service center	877-463-6367
OISC (Office of the Indiana State Chemist)	765-494-1492
IOSHA (Indiana Occupational Safety and Health)	317-232-2655
Illinois Environmental Protection Agency, 24 hours spill reporting	800-782-7860
Michigan Department of Environmental Quality, 24 hour spill reporting	800-292-4706
Ohio Environmental Protection Agency, 24 hour spill reporting	800-282-9378
Kentucky Department of Environmental Protection, 24 hour spill reporting	800-928-2380

Federal Contacts:

NRC (National Response Center)	800-424-8802
U.S. EPA Region V, spill reporting	312-353-2318
Agency for Toxic Substance and Disease Registry	800-232-4636
U.S. Coast Guard, Marine Safety Office, Louisville, KY	502-969-4006
U.S. Coast Guard, Marine Safety Office, Chicago, IL	773-775-2451
FBI (Federal Bureau of Investigations), Indianapolis Field Office	317-595-4000

Other Contacts:

Indiana 811, Know what's below. Call before you dig.	811 or 800-382-5544
Chemtrec, chemical data information	800-424-9300

Quick Reference Information Sheet for assessing spills and threats to water

CONTACTS

1. **Spiller information:** name, address, contact numbers
2. **Land owner information** (if different): name, address, contact numbers
3. **Spill location** (if different): facility name, address, directions, contact numbers
4. **Other contacts:** for lease holders, contractors, response agencies

CIRCUMSTANCES

5. **Spilled material/description.** Safety Data Sheet. What is it used for?
6. **Date and time of spill** (when found vs. when spill likely began)
7. **Cause of spill.**
8. Has the spill led to threats of **human safety**? Any evacuations? Any injuries?
9. Has the **release stopped**? Can it be stopped without compromising safety?
10. Was there an immediate or any **spill response**? Many fire and street departments initially dam or absorb spills with kitty litter or sand. Spillers are ultimately responsible for initiating and completing a spill response.

SPILL CHARACTERISTICS

11. Describe **area affected**, estimate square feet or miles of affected water.
12. Describe **amount spilled**, amount contained, and capacity of containers or vessels.
13. **Amount recovered** or why no recovery (very few exceptions).

SPILLS TO WATER

14. Are there **surface waters** nearby or involved? Roadside ditches, streams, ponds?
15. Are the surface waters **standing, flowing, discharging**? To where?
16. Do you see **fish** or other animals in or near the water? Are they alive, stressed, dead?
17. Are there ditches, low areas, storm drains inlets, field tile risers to water?

SPILLS TO SOIL

18. Are there **sandy or gravelly native soils**, backfill areas, dry wells nearby/involved?
19. Are there **water wells, pipelines, phone lines, or utilities** that spills might follow?

SPILLS TO TILES, SEWERS, STORM DRAINS

20. For impacted **storm drains/storm sewers**, are there signs of the spilled material in **manholes or catchment basins**? Check where the storm drain exits into surface water. Can spilled materials be safely contained and collected from catchment basins or storm drain outlets before entering water?
21. For impacted **combined or sanitary sewer** systems, contact the wastewater utility. Will the material be safely treated? Will it upset or flow through the plant? Can they safely separate and contain it without hurting their plant? Are they experiencing any bypass events where spilled materials may discharge directly to water? Check bypass outfalls for spilled material. **Call IDEM Emergency Response Section at 888-233-7745 immediately for upset plants.** Non-emergency treatment plant questions will be advised during normal business hours by calling IDEM, Office of Water Quality (OWQ), at 317-232-8670.

