

City of Oshkosh, WI
Illicit Discharge Detection and Elimination (IDDE) Program
Municipal Separate Storm Sewer System

Program Overview and Goals

The goals of the City of Oshkosh's IDDE program are to:

- 1) Reduce storm water pollution to the nearby receiving waters including Lake Butte des Morts, Fox River, Sawyer Creek, Campbell Creek, and Lake Winnebago.
- 2) Prevent non-storm water contaminants or flows from entering the municipal storm sewer system. Non-storm water flows consist of (but are not limited to): sanitary sewer flows, industrial process wastewater, accidental spills or intentional dumping of liquid or solid material that enters the storm sewer system, or any discharge into the city's storm sewer system that is not composed entirely of storm water, except as allowed by the City of Oshkosh Municipal Code Chapter 14.
- 3) Maintain an efficient and structurally sound municipal separate storm sewer system.
- 4) Comply with state and federal regulations as defined in the City's MS4 Permit.

This IDDE Program document describes the City's program as required by MS4 Permit Section 3.4 to develop a program related to Permit Sections 2.3.2 to 2.3.6 (see Attachment 1).

The City's Illicit Discharge Ordinance is contained in Articles V and VI of Chapter 14 – Storm Water Management in the City of Oshkosh Municipal Code.

Components of the City's IDDE Program

1. IDDE Field Screening

Responsible Position: DPW / Engineering Division; Civil Engineer Supervisor
Current Position Staff: Alyssa Deckert;
Phone: (920) 236-5065
Email: adeckert@ci.oshkosh.wi.us

Program Description:

The City contracts with a qualified professional services provider to conduct the IDDE dry weather field screening of the City's MS4 outfalls in compliance with Section 2.3.2 of the MS4 Permit. The contracted provider conducts the field work, provides an annual written document of the results of the dry weather screening, and conducts a presentation to the City's Storm Water Appeals Board in the spring of each year summarizing the previous year's field work. The annual field screening is conducted as follows:

- 1) Annual Field Screening – classification of outfalls and schedule
 - a) Priority outfalls are screened every year. Priority outfalls are those outfalls identified with the highest potential for illicit discharge. Priority outfalls are identified based upon the following criteria:
 - i) History of known or suspected illicit discharges within the past 5 years
 - ii) Outfalls with greater than 80% impervious area within the drainage area
 - iii) Outfalls with highly industrial or commercial land use within the drainage area.
 - b) Non-priority major outfalls are screened once every five years. Non-priority, major outfalls are those outfalls with an inside diameter greater than or equal to 36" diameter or equivalent.
 - c) Non-priority, minor outfalls are screened once every ten years. Non-priority minor outfalls are outfalls with an inside diameter less than 36" diameter or equivalent.
 - d) Supplemental outfalls are additional screening locations that do not meet the legal definition of an outfall according to the MS4 general permit. These locations are generally detention basin inlets.

The supplemental outfalls are screened based on further classification as either priority, non-priority major, or non-priority minor outfalls.

- e) Screening points are located at the outfall, or if submerged at the nearest accessible upstream manhole location.

Table 1 shows the status of storm sewer outfalls for the entire City of Oshkosh.

Table 1: Storm Sewer Outfalls for the Entire City of Oshkosh Status as of 2019 Field Season			
Outfall Category / Type	Priority	Non-Priority	Total
Major	11	75	86
Minor	17	223	240
Supplemental	4	89	93
Total	32	387	419

- 2) The contracted firm notifies the Engineering Division when annual IDDE screening is scheduled.
- 3) The contracted firm conducts field screening procedures at the scheduled outfalls and collects information from the screening process. (See Attachment 2 for example field data collection sheet). Field screening procedures are informed by the “Illicit Discharge Detection and Elimination: A guidance Manual for Program Development and Technical Assessments” (Center for Watershed Protection / Robert Pitt, October 2004) as well as the WDNR’s Illicit Discharge Detection and Elimination guidance document (March 2012). Field screening procedures have evolved after several years of experience to meet permit screening requirements and parameters as discussed with and approved by the WDNR. Details on the screening procedures employed can be found in the latest “Ongoing Screening Summary Report”.
- 4) The contracted firm notifies the Engineering Division when IDDE screening is completed and prepares an annual report.
- 5) The contracted firm provides a written report by February of each year documenting the results of the field screening conducted the previous year. The report includes:
 - a) Dates, times, and locations of outfalls screened.
 - b) Weather conditions
 - c) Visual observations (trash, flow, color, odor, turbidity, oil sheen or surface scum, other evidence of non-storm water discharge)
 - d) Field parameters measured (pH, chlorine, detergents, ammonia, temperature, conductivity).
 - e) Physical conditions of outfall structure
- 6) An annual presentation is conducted for the Storm water Utility Appeals Board summarizing the previous year’s findings.

2. Response to Spills and Reports of Illicit Discharge / IDDE Source Investigation and Elimination

Responsible Position: DPW / Engineering Division; Civil Engineering Supervisor

Current Position Staff: Alyssa Deckert;

Phone: (920) 236-5065

Email: adeckert@ci.oshkosh.wi.us

Program Description:

- 1) The Engineering Division may be notified of an Illicit Discharge or Spill primarily from two sources:

- a. If, during the annual IDDE screening, the Contractor field crew finds an obvious illicit discharge (e.g.: a direct connection of a sanitary lateral, illegal spill, or other evidence) the field crew will document the situation with photographs and test data and immediately notify City's Engineering Division.
 - b. Direct communication from a citizen and/or City field staff person may notify the Engineering Division of an observed condition. The City has information posted on its website on how to report spills and illicit discharges. Illicit discharges may be reported through Connect Oshkosh or through direct contact to the Engineering Division.
- 2) The City has authority to prohibit illicit discharges and carry out inspections, monitoring, and enforcement measures necessary to ensure compliance with this program through the City's Illicit Discharge Ordinance sections in Articles V and VI of Chapter 14 – Storm Water Management in the City of Oshkosh Municipal Code.
- 3) If a hazardous or explosive potential exists, the contracted firm notifies the City Engineering Division of a potentially dangerous situation and the City Engineering Division contacts the Oshkosh Fire Department (920-236-5240 or 911) for emergency procedures to prevent further release of material, contain, cleanup, and dispose of material.
- 4) If the spill or release of a hazardous substance does not qualify as an exemption (see Attachment 3) the City Engineering Division immediately calls the WDNR spills hotline (1-800-943-0003).
- 5) If a spill qualifies as an exemption (see Attachment 3), City staff conduct clean up procedures, WDNR notification is not required.
- 6) If a non-emergency situation exists, the City Engineering Division contacts the DPW Streets Division, Building/Plumbing Inspector, or other staff as needed to investigate the situation. The City will use storm sewer system mapping and other information to track the discharge upstream to its source. The contracted firm's field crew may assist as needed but generally turns over the investigation to City.
- 7) Tracking of potential illicit discharges may result in detecting and eliminating cross-connections and leakage from sanitary conveyance systems into the MS4. The City's annual sanitary and storm sewer televising program supplements the IDDE field screening and periodically identifies cross-connections between sanitary conveyances systems and the MS4. When a potential cross-connection is observed the City's televising team contacts the Engineering Division for follow-up investigation and corrective actions.
- 8) If during investigative efforts, dye testing is used, the City will provide notice to the WDNR as well as the Oshkosh Police and/or Fire Department in advance of dye testing due to the likelihood of dye appearing in waterways and being observed and reported as an illicit discharge or spill.
- 9) If the non-emergency situation involves a neighboring municipality (discharges to, or coming from), the City will contact that municipality within one working day.

<u>Town of Algoma</u> Richard Heath Town Administrator (920) 235-3789	<u>Town of Black Wolf</u> Thomas Coppola Storm water Utility District Chairperson (920) 688-1404	<u>Town of Nekimi</u> Glen Barthels Town Chairman (920) 426-5811
<u>Town of Oshkosh</u> Jim Erdman Town Chair (920) 233-3618	<u>Town of Vinland</u> Chuck Farrey Town Chairman/ Road Supervisor (920) 582-7733	

- 10) The City will then address the identified problem to terminate the illicit discharge and/or connection. This can take several forms from direct action by the City staff, to securing additional resources to implement a fix, to working with a landowner to mitigate an existing situation.
- 11) The City's goal is to eliminate the identified discharge as soon as possible (with a target of three working days to the maximum extent practicable). If it will take the City more than 30 days to remove an illicit connection, or if the potential illicit discharge is from a facility with WPDES permit coverage, the WDNR will be contacted to discuss an appropriate action and/or timeframe for removal. The City will keep the WDNR informed of progress and take appropriate steps to remedy the situation, including when the situation is corrected.
- 12) IDDE screening and response procedures are documented by the City (including dates and locations of IDDE screenings, reports of alleged illicit discharges/date of report/follow-up actions taken, dates of discovery of illicit discharges, identification of outfalls or other areas where illicit discharges have been discovered, sources (including description of the responsible party) of illicit discharges (if known) and actions taken/dates to address discovered illicit discharges) and kept on file for annual reporting or other future reporting or follow-up reasons.

PROGRAM: Illicit Discharge Detection and Elimination
MS4 Permit Language

3.4 Illicit Discharge Detection and Elimination

The permittee shall submit to the Department the illicit discharge detection and elimination program developed for the term of this permit as required under section 2.3.2 to 2.3.6 of this permit by March 31, 2022.

2.3.2 IDDE field screening. On-going dry weather field screening shall be conducted at 100% of the total major outfalls at least once during the term of the permit. Additionally, the permittee shall select minor outfalls for annual on-going dry weather field screening during the term of the permit. The permittee shall develop a prioritization procedure to assist with selecting minor outfalls and consideration shall be given to hydrological conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or buildings in the area, history of the area and land use types when selecting outfalls for annual field screening. At a minimum, field screening shall be documented and include:

- a. Visual Observation - A narrative description of visual observations including color, odor, turbidity, oil sheen or surface scum, flow rate and any other relevant observations regarding the potential presence of non-storm water discharges or illicit dumping.
- b. Field Analysis - If flow is observed, a field analysis shall be conducted to determine the presence of illicit non-storm water discharges or illicit dumping. The field analysis shall include sampling for pH, total chlorine, total copper, total phenol and detergents, unless the permittee elects instead to use detergent, ammonia, potassium and fluoride as the indicator parameters. Other alternative indicator parameters may be authorized by the Department in writing.
 - (1) Field screening points shall, where possible, be located downstream of any source of suspected illicit activity.
 - (2) Field screening points shall be located where practicable at the farthest manhole or other accessible location downstream in the system. Safety of personnel and accessibility of the location shall be considered in making this determination.

Note: The Department's MS4 Illicit Discharge Detection and Elimination guidance document includes several recommendations regarding selection of outfalls for field screening, screening frequency, indicator parameter selection, indicator parameter action levels and documentation. The Illicit Discharge Detection and Elimination guidance is available on the Department's Internet site at: <https://dnr.wi.gov/topic/stormwater/municipal/overview.html>

2.3.3 IDDE source investigation and elimination. Written procedures for responding to known or suspected illicit discharges, including an assessment of risks and the establishment to response times. At a minimum, procedures shall be established for:

- a. Investigating portions of the MS4 that, based on the results of field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-storm water discharges.
- b. Responding to spills that discharge into and/or from the MS4 including tracking and locating the source of the spill if unknown.
- c. Preventing and containing spills that may discharge into or are already within the MS4.
- d. Promoting, publicizing, and facilitating public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including a form, website, email address, and/or telephone number for complaints and spill reporting, and publicize to both internal permittee staff and the public.
- e. Notifying the Department immediately in accordance with ch. NR 706, Wis. Adm. Code, in the event that the permittee identifies a spill or release of a hazardous substance, which has

resulted or may result in the discharge of pollutants into waters of the state. The Department shall be notified via the 24-hour toll free spill hotline at 1-800-943-0003. The permittee shall cooperate with the Department in efforts to investigate and prevent such discharges from polluting waters of the state.

- f. Detecting and eliminating cross-connections and leakage from sanitary conveyance systems into the MS4.
- g. Providing the Department with advanced notice of the time and location of dye testing within an MS4. Department notification prior to dye testing is required due to the likelihood that dye observed in waterways will be reported to the Department as an illicit discharge or spill.
- h. Documentation of the following information:
 - (1) Dates and locations of IDDE screenings conducted in accordance with section 2.3.2.
 - (2) Reports of alleged illicit discharges received, including dates of the reports, and any follow-up actions taken by the permittee.
 - (3) Dates of discovery of all illicit discharges.
 - (4) Identification of outfalls, or other areas, where illicit discharge have been discovered.
 - (5) Sources (including a description and the responsible party) of illicit discharges (if known).
 - (6) Actions taken by the permittee, including dates, to address discovered illicit discharges.

2.3.4 The permittee shall take appropriate action to remove known illicit discharges from its MS4 system discovered under section 2.3 as soon as possible. If it will take more than 30 days to remove an illicit connection or if the potential illicit discharge is from a facility with WPDES permit coverage, the Department shall be contacted to discuss an appropriate action and/or timeframe for removal. Notwithstanding this 30-day timeframe and notification of the Department, the permittee shall be responsible for any known illicit connections to its MS4 system that are a significant risk to human health and the environment.

2.3.5 In the case of interconnected MS4s, the permittee shall notify the appropriate municipality within one working day of either of the following:

- a. An illicit discharge that originates from the permittee's permitted area that discharges directly to a municipal separate storm sewer or property under the jurisdiction of another municipality.
- b. An illicit discharge that has been tracked upstream to the interconnection point with or outfall from another municipality.

2.3.6 The name, title and phone number of the individuals responsible for responding to reports of illicit discharges and spills shall be included in the illicit discharge response procedure.

Non-Priority Major Outfall

Structure Type:

Closed Pipe Outfall

Discharge Location:

Water of the State

NR 216 Class:

Major Outfall

Shape:

Pipe - Circular

Material:

CMP

City ID:

N/A

Dimensions

Diameter (in): 21

Height/Depth (in):

Width (in):



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Outfall Notes:

Storm sewer from E Fernau Ave discharges to stream from east.

Location Map



Mapping Precison:

Mapping GPS

☐ Not Physically Located

County Coordinates:

Northing: 488,055

Easting: 793,684

Latitude/Longitude:

Latitude: 44.05836

Longitude: -88.53544

Inspection Date: 10/8/2019 10:28:43 AM

Inspector: JCW

Inspection Type: Ongoing

Previous Rainfall (hrs): 48-72

Flow Description: Moderate

Submerged: None Depth (in):

Illicit Discharge Potential: Unlikely

Notes: Sample collected from pipe flow.

Floatables: ☐ Petrol, Sheen ☐ Suds ☐ Sewage ☐ Algae ☐ OtherOdor: ☐ Petroleum ☐ Musty ☐ Sewage ☐ Chlorine ☐ Other☐ VOC/Solvent ☐ Fishy ☐ Sulfur ☐ FragrantTurbidity: Color: Gross Solids: ☐ Litter ☐ Veg. Debris ☐ Sediment ☐ OtherVegetation: ☐ Inhibited ☐ ExcessiveBenthic Growth: ☐ Green ☐ BrownStains: ☐ Flow Line ☐ Oil ☐ Rust Stains☐ Paint ☐ OtherNon-illicit: ☐ Natural Sheen ☐ Natural Suds/Foam

Physical Condition Assessment

Graffiti: None

Erosion: None

Deposition: None Depth (in):

Damage: Moderate ☐ Displacement ☐ Undercut ☒ Crushed☒ Corrosion ☐ Cracks/Structural Damage

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2019

Sampling Results

Sample Location: Flow

Sample ID: 101008-11

Time Collected: 10:30

Total Chlorine (field): 0 ppm

Free Chlorine (field): 0 ppm


Ammonia (field): 0 ppm


pH (field): 7.40 units


Temperature (field): 62 °F

Conductivity (field): 698 µS/cm

Detergents: 0 mg/L

Inspection Date: 10/5/2011 2:46:18 PM		Type: Ongoing	Flow: None	Previous Rainfall (hrs): 72+
Illicit Discharge Potential: Unlikely		Inspector: JCW		
Submerged: None		Depth (in):		
Sampling Results Sample Location: Total Chlorine: -- ppm Free Chlorine: -- ppm Ammonia: -- ppm pH: -- units Temperature -- ° F Conductivity: -- µS/cm Detergents: -- mg/L		Floatables: None Odor: None Turbidity: None Color: None Gross Solids: None Vegetation: None Benthic Growth: Slight Stains: Slight Non-illicit: None		
		Notes Dirt wet but no flow leaving through outfall pipe.		
		Condition Assessment Graffiti: None Erosion: None Deposition: Moderate 7 in. Damage: Minor		
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2011				

Inspection Date: 5/26/2011 9:23:00 AM		Type: Other	Flow: Submerged, indeterminate	Previous Rainfall (hrs): 72+
Illicit Discharge Potential: Unlikely		Inspector: JCW		
Submerged: Partially		Depth (in):		
Sampling Results Sample Location: Total Chlorine: -- ppm Free Chlorine: -- ppm Ammonia: -- ppm pH: -- units Temperature -- ° F Conductivity: -- µS/cm Detergents: -- mg/L		Floatables: Odor: Turbidity: Color: Gross Solids: Vegetation: Benthic Growth: Stains: Non-illicit: None		
		Notes Outfall partially submerged. Outfall screened upstream at 15-1219 US1.		
		Condition Assessment Graffiti: None Erosion: None Deposition: None 0 in. Damage: Moderate		
			 o20110526092324.JPG	
2011				

Inspection Date: 9/2/2009		Type: Initial	Flow: None	Previous Rainfall (hrs): 72+
Illicit Discharge Potential: Unlikely		Inspector: JCW		
Submerged: None		Depth (in): 0		
Sampling Results Sample Location: Total Chlorine: -- ppm Free Chlorine: -- ppm Ammonia: -- ppm pH: -- units Temperature -- ° F Conductivity: -- µS/cm Detergents: -- mg/L		Floatables: Odor: Turbidity: Color: Gross Solids: Vegetation: Benthic Growth: Stains: Non-illicit: None		
		Notes Wet, no flow		
		Condition Assessment Graffiti: None Erosion: None Deposition: 4 in. Damage: Minor		
			 Osh09_DSCN6347.JPG	
2009				