



*City of*  
**Windsor  
Heights**  
*the heart of it all*

# **Illicit Discharge Detection & Elimination Program**

**March 16, 2010**

**Report Prepared by**

Dave Breese Windsor Heights City Inspector

## Introduction

In general terms, an illicit discharge is any discharge into the municipally owned stormwater drainage system that is not composed entirely of stormwater. Exceptions to this include water relating to fire fighting activities and discharges from facilities already covered under a National Pollution Discharge Elimination System (NPDES) permit. Illicit discharges are a cause for concern because, unlike wastewater which flows to a wastewater treatment plant, stormwater generally flows to waterways without receiving any treatment. Illicit discharges can contain pollutants such as pathogens, sediment, oil/grease, nutrients (e.g. phosphorous and nitrogen), surfactants (e.g. soap and detergents), and various other toxins.

The City of Windsor Heights Iowa has established an Illicit Discharge Detection and Elimination (IDDE) program as of January 1, 2010. The following report describes the IDDE program in Windsor Heights and will discuss the illicit discharges that have been identified and eliminated since adoption of IDDE.

## IDDE Program Description

In order to be effective, any good IDDE program will consist of multiple parts. The City of Windsor Heights IDDE program consists of four different components:

- Ordinance defining and prohibiting illicit discharges
- Stormwater infrastructure mapping
- Outfall inspections
- Stormwater sampling

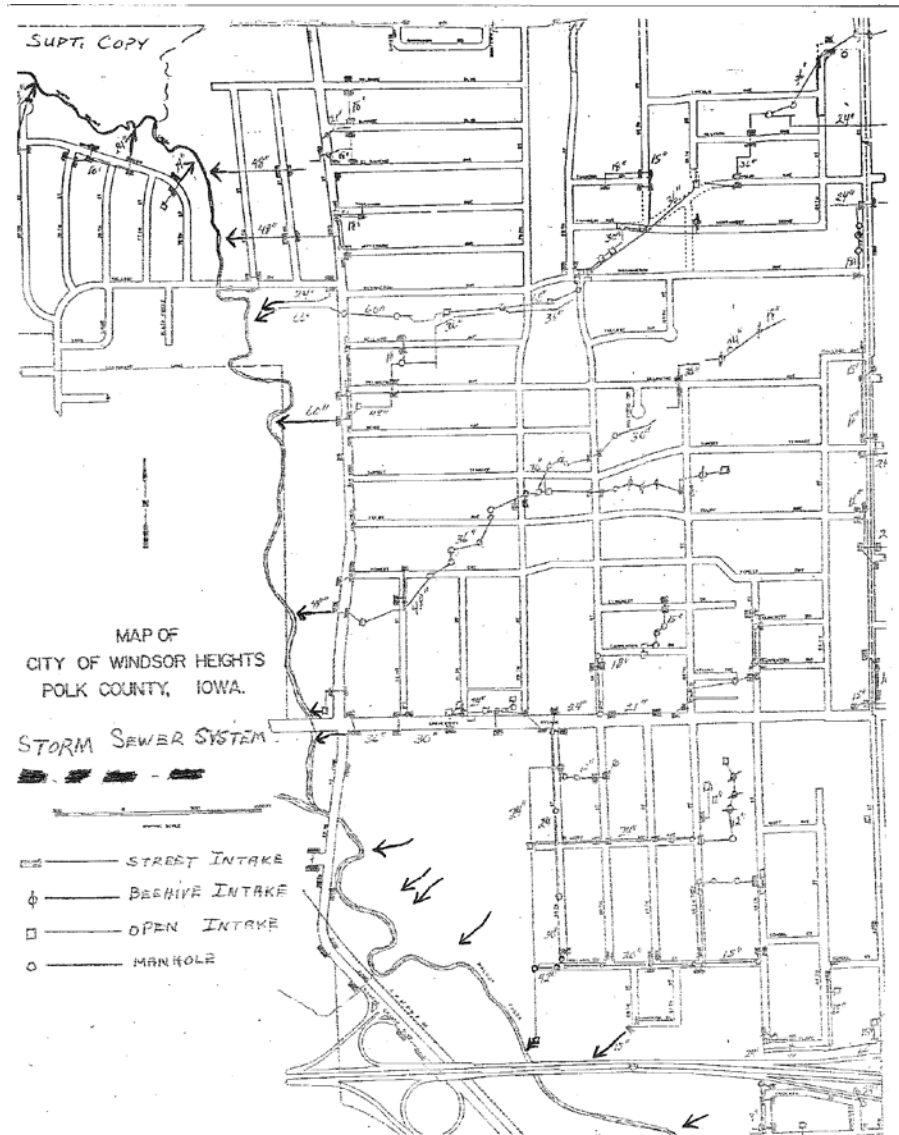
Each individual component of the City of Windsor Heights IDDE program is discussed in greater detail below.

## Ordinance

The Illicit Discharge Ordinance was presented to the Windsor Heights City Council and became part of the Municipal Code October 15, 2007. To view the entire Code please visit [www.windsorheights.org](http://www.windsorheights.org). The City Inspector is given authority to inspect and enforce these provisions. Penalty for non-compliance can include fines, suspension of services, and termination of access to stormwater system.

The Windsor Heights Illicit Discharge ordinance only allows stormwater, water from fire fighting activities, discharges already covered under the NPDES permit, landscape irrigation, uncontaminated pumped ground water, foundation or footing drains, air conditioning condensation, and other low risk discharges of water that do not contain pollutants to discharge into the City's stormwater drainage system.

# Stormwater Infrastructure Mapping



The Stormwater Infrastructure Mapping consists of:

- Storm Drains
- Stormwater piping
- Stormwater outfalls

As the stormwater facilities grow in future years this infrastructure map will change with additional information such as:

- Stormwater treatment practices (e.g. stormwater treatment ponds, bioretention cells, rain gardens etc ).

## Outfall Inspections

Stormwater Utility staff regularly inspects the stormwater outfalls in the City of Windsor Heights. These inspections are conducted in accordance with procedures outlined in the EPA's Illicit Discharge Detection and Elimination Guidance Manual. All inspection field sheets are kept on file per request of IDNR (Iowa Department of Natural Resources ). With the current staff levels, the stormwater outfalls will be inspected twice a year. A copy of the inspection checklist is included at the end of this document.



**Stormwater outfall located south of College Street bridge and west of Clive Elementary School.**

## Stormwater Sampling

If it is thought that an outfall could potentially have an illicit discharge flowing to it, samples are to be taken in an attempt to find the source. Sometimes the source is obvious and sampling is not necessary, however, it is necessary to follow up on a suspected illicit discharge by taking water samples. Sample bottles are brought along during all outfall inspections. The test strips will give a first glance at nutrient levels in the water and can help narrow down the source of potentially illicit discharge while in the field. If necessary, samples will be collected and brought to a lab for additional analysis and the Iowa Department Natural Resources (IDNR) will be contacted for their assistance.

## Illicit Discharges in Windsor Heights

The following section summarizes illicit discharges identified since January 1, 2010. The circumstances surrounding the discovery of the illicit discharge are discussed, as well as the steps taken to eliminate the discharge.

### Detection Example: Parking lot run-off



During a routine stream walk, staff inspected an outfall on the south end of a parking lot on 73<sup>rd</sup> Street that is a result of oil run-off from vehicles parked in lot. As seen in the picture above the sheen of oil is running out of outfall and continuing towards Walnut Creek. When the parking lot was built, it was designed to discharge into a terraced section of Walnut Creek. The City Inspector will work with the property owner on various options to address the issue.

### **“NO DUMPING”**

The City of Windsor Heights have designed and purchased “NO DUMPING” intake tags to help eliminate illicit discharges within the city limits and to help educate citizens on where their intakes directly link. The citizens of Windsor Heights will notice as weather warms up these tags will be installed throughout the city, with a goal of tagging 100% all intakes.

See pictures below.



## Future Actions

The future development of this program includes a review how swimming pool discharge is handled and a review of landscape irrigation discharge and the possibility of what nutrients that contains.

## **Conclusion**

As the stormwater utility grows, so will this Illicit Discharge Detection & Elimination Program along with all other components required by the MS4 permit. With promotion and education we all can help reduce stormwater run-off and keep our waters clean.

## City of Windsor Heights Quarterly Visual Inspection-Field Sheet

Use one form per outfall

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the State of Iowa Department of Natural Resources. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

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Facility Name

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Street Address

City **Windsor Heights** State **IA** ZIP Code **50324**

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Name of Person Conducting Inspection **Dave Breese** Inspection Date

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Employer **City of Windsor Heights**

Telephone Number **(515)-279-3662**

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Out fall Number (make reference to site map) Description of Outfall (e.g., ditch concrete pipe, grassed swale)

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Time of Rainfall Event

Time of Visual Inspection

Optional: Amount of Rainfall

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Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect sample of storm water being discharged from facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or other visual indicators of storm water pollution and the probable sources of any storm water contamination.

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Color:	Clear	Red	Yellow	Brown	Other
Odor:	None	Musty	Sewage	Rotten Egg	Other
Clarity:	Clear	Cloudy	Opaque	Suspended Solids	Other
Floatables:	None	Foam	Garbage	Oily Film	Other
Deposits/ Stains:	None	Oily	Sludge	Sediments	Other

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Comments: