

**STORM WATER – ILLICIT DISCHARGE DETECTION
 AND ELIMINATION (IDDE)**

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

Introduction

In accordance with the permit issued for UNL’s small municipal separate storm sewer system (SMS4) by the Nebraska Department of Environmental Quality (NDEQ), UNL must develop and implement a program to detect and eliminate illicit discharges to the storm sewers on City and East Campuses. While a complete IDDE program has several parts, this SOP is primarily directed at that component which EPA and NDEQ typically refer to as “public education.”

This SOP provides a short narrative on the definition of “illicit discharges,” followed by examples of illicit discharges and prevention measures, and finally instructions for action to take in response to suspected or known illicit discharges. UNL’s IDDE program also has other components, e.g., storm sewer maps, ordinances/prohibitions, and surveillance measures, however, discussion of these components is beyond the scope of this SOP.

Definition of Illicit Discharges

In short, an “illicit discharge” is defined as any discharge to a storm sewer that is not composed entirely of storm water (i.e., rain water and snow melt). Pollutants in illicit discharges may include sediments, heavy metals, toxic chemicals, oil and grease, solvents, excess nutrients, and harmful microorganisms. Exceptions include:

- Water associated with fire-fighting activities;
- Water that does not contain pollutants; or
- Other discharges authorized under the terms of another permit.

The following table compares and contrasts illicit and non-illicit discharges.

Illicit Discharges	Discharges that are not Illicit (if evaluated and confirmed to be free of pollutants)
Effluent from septic tank	Landscape irrigation
Vehicle wash waters	Air conditioning condensation
Laundry wastewater	Foundation drains*
Chemical spills	Water from potable sources (i.e., hydrants, faucets)
Oil/fuel drips from poorly maintained equipment	Uncontaminated pumped groundwater (i.e., sump pumps) or natural springs*
	Storm water pumped from excavations*

*These discharges are considered ‘illicit’ unless they are authorized by a specific discharge permit.

Illicit discharges are considered “illicit” because, unlike sanitary sewers, storm sewers discharge pollutants directly to lakes and streams. Sanitary sewers are connected to complex treatment facilities that clean the water of pollutants prior to discharge.

Illicit discharges may enter the storm sewers through direct connections (i.e., piping either mistakenly or deliberately connected to the storm drains) or indirect connections (i.e., infiltration from cracked sanitary systems, spills collected by drain outlets, or wastes dumped directly into a drain).

On UNL City Campus, storm sewers discharge to Antelope Creek. On UNL East Campus, storm sewers discharge to Dead Man's Run. Anything that enters UNL's storm sewer system eventually finds its way to one of these water bodies and can contribute to environmental degradation.

Potential Sources and Control Measures

Whether at home or work, members of the campus community can be good stewards of the environment by following the simple strategies outlined below. More detail regarding institutional policies, procedures, and strategies that are protective of water quality can be found in the Appendix to this SOP.

- Wash vehicles and equipment at facilities designed for that purpose (e.g., car wash). See EHS SOP, **Vehicle/Equipment Washing** for additional information.
- Maintain vehicles and equipment to eliminate fluid leaks. Avoid "topping off" the tank when fueling to minimize the potential for spills due to over-filling.
- Contact EHS for chemical disposal services. Guidance on disposal of a variety of waste types is available in numerous SOPs published on the EHS website.
- Use trash and cigarette butt receptacles provided throughout campus. Do not litter.
- Avoid power-washing equipment, structures, tools, etc. outdoors and in areas where drains are not connected to the sanitary sewer system. If thought to be necessary, consult with EHS prior to conducting this activity to develop procedures to minimize pollutants loading to the environment.
- Store chemicals, fertilizers, de-icers, oils, greases, and other potential pollutants in an area protected from precipitation and in a manner to prevent migration of releases or leaks to surface waters and storm sewer drains.
- Observe UNL procedures for spill/release pre-planning and response, as described in the following EHS SOPs and as applicable to your situation:
 - **Preplanning for and Responding to Hazardous Chemical Spills**
 - **Cleaning Up Spills of Biohazardous Materials**
 - **Spill Prevention Control and Countermeasures (SPCC) & Storm Water BMPS – Spill/Release Preparation & Response).**
- Report suspected illicit discharges promptly (see next section).

Illicit Discharge Avoidance, Detection, and Reporting

All members of the campus community play an active role in protecting the quality of surface waters. By adhering to established facility design guidelines and prudent operational procedures, great strides are made to prevent contamination from ordinary operations of UNL. In addition, the campus community can be the "eyes and ears" of the campus to eliminate illicit discharges.

Illicit discharges often manifest as flow to or in the storm sewer during dry weather. Some dry weather flows in storm sewers do not contain pollutants. Sources of such flows may be natural springs, groundwater seepage, leaks from domestic water supply lines, water line flushing, landscape irrigation overflow, diverted stream flow, water from foundation drains, air conditioning condensate, de-chlorinated swimming pool discharges, etc. However, it is

necessary to determine whether the flow contains pollutants to determine if it is an “illicit” discharge.

Report any suspected dry weather flows or known or suspected illicit discharges to the UNL storm sewer system to EHS (phone: (402) 472-4925; fax: (402) 472-9650; email: ehs@unl.edu). Conditions can change rapidly and some sources may be intermittent or transient. Therefore, prompt reporting to EHS is encouraged. EHS will investigate potential sources, characterize flows, and take action to stop illicit discharges.

Appendix – Protective Policies/Procedures/Activities at UNL

The table below, while not exhaustive, lists many of the steps UNL has taken to prevent illicit discharges.

Potential Sources of Illicit Discharges	Protective Action
Improper chemical disposal (dumping)	EHS provides services to collect and properly dispose of chemical wastes generated at UNL. Waste management procedures/guidance are available on the EHS website.
Improper or ineffective chemical storage	EHS provides guidance on proper chemical storage and regularly audits campus operations. Proper chemical storage procedures, by hazard class, are available on the EHS website.
Improper or ineffective management of oils (petroleum, vegetable, etc.)	EHS maintains current Spill Prevention Control and Countermeasures Plans (SPCC) and supplemental procedures to minimize the risk of adverse events related to oil storage, transport, or transfer at certain campus facilities that store large quantities of oil/fuel. Operations personnel are trained. Additional information on procedures, plans, and web-based training is available on the EHS website.
Trash management	Closed refuse containers are provided at all buildings to minimize litter and facilitate solid waste disposal. These containers are serviced daily, and litter removal is conducted daily.
Improper building connections	All building construction and renovation work must be conducted through UNL Facilities Management and Planning (FMP). Work must conform to national, state, and local codes and ordinances, as specified in UNL's Design Guidelines (available on the FMP website), and contract documents.
Spills, leaks, or releases	EHS encourages pre-planning for spills, leaks, or other releases of hazardous materials, and provides guidance on action to take in the event of a release to the environment. Arrangements are maintained with local agencies and support contractors to minimize the impact from releases.
Sediment, erosion, and control of other potential contaminants resulting from land-disturbing activities	EHS and/or FMP ensure that contractors are taking appropriate actions to ensure that their projects do not have a negative impact on water quality. See EHS SOP, Construction Site NPDES Permits .
Utility boiler and/or cooling tower discharges	Most discharges associated with utility operations are directed to the sanitary sewer system. Those that are not, are authorized by a specific permit and controls are in place to minimize pollutants.
Landscaping operations	Landscaping operations adhere to water conservation practices. See the UNL Landscape Services website for more information.
Fleet vehicle operations	Fleet vehicle maintenance and storage is provided through the UNL Transportation Services department. All vehicle maintenance and repair is conducted inside of a building. Buses are primarily parked under cover when not in use.