

BMP 6.04 STORMWATER INLET AND CATCH BASIN INSPECTIONS

November 2019

Purpose

The University of Nebraska-Lincoln holds a Small Municipal Separate Storm Sewer Systems General NPDES Permit NER310000 with Nebraska Department of Water Energy and Environment (NWDEE). Within the permit Parts IV.B.5.d.1.a & e require the University to develop a strategy to inspect and clean inlets as well as develop a procedure to dewater and dispose of materials extracted from stormwater catch basins. The purpose of this IOP is to develop a process to conduct inspections of inlets and catch basins; and describe procedures to dewater and dispose of materials collected during the inspections in accordance with the University of Nebraska-Lincoln NPDES permit.

Scope

This procedure applies to staff in Environmental Health and Safety and Husker Energy and Power. Applicable catch basins and inlets are located within the boundaries of the SMS4 permit for City and East Campus. Currently, there are no engineered catch basins that require annual inspection located on either campus. Environmental Health and Safety staff will continue to review new development projects to identify and include newly constructed catch basins to this procedure indefinitely.

The EHS Specialist is responsible for keeping these procedures up to date, overseeing the inlet maintenance program for compliance with regulatory requirements, and providing periodic training on conducting thorough inspections. The EHS Specialist may provide technical support for maintenance activities by assisting in inlet inspections but will refer to Husker Energy and Power if any maintenance is necessary beyond grate inlet cleaning.

Husker Energy and Power is responsible for ensuring their staff is complying with this procedure. Husker Energy and Power supervisors must train personnel to follow these procedures using the most recent version of this IOP. Husker Energy and Power is to contact EHS if any derivation of the procedures is intended to occur.

Inspection Criteria

There are four criteria that initiate catch basin and inlet inspection procedures.

1. Catch basins are to be inspected annually and cleaned as needed.
2. Inlets within 100 feet down gradient from construction sites 1 acre or greater in size are to be inspected and cleaned as necessary prior to termination of the construction stormwater permit and following substantial stabilization of the site.
3. Inlets specifically associated with an illicit discharge during the previous year are to be inspected the subsequent year to verify that the condition leading to the illicit discharge no longer exists.
4. Inlets that have required maintenance during the previous year for clogging or other discharge malfunction are to be inspected during the subsequent year to verify that the conditions leading to the malfunction no longer exist.

Inspection Protocol

Husker Energy and Power is responsible for correctly updating the work order system anytime an inlet has been identified as having a discharge malfunction. Proper identification and condition leading to the maintenance is necessary for any follow-up inspections to be accurate. Utility Services will identify inlets by location or Object ID through the University Campus Viewer (GIS System) and will use the attached inspection form as a guide to describe the inadequate conditions. A closed work order will indicate an inspection has been completed.

Once per year the EHS Specialist will generate a list of inlets and catch basins that are subject to inspection. This list will include all inlets identified in the previous year as having a discharge malfunction and any inlets associated with illicit discharges. The list will identify inlet and catch basin structures by Object ID or location through the University Campus Viewer (GIS System). The EHS Specialist will work with Husker Energy and Power to insure all identified inlets are inspected during the calendar year. Preference will be given to inspect inlets in the fall and beginning winter months in an attempt to remove any fallen debris that might be obstructing the inlets.

Inspections of inlets 100 feet down gradient of construction sites will occur before filing for a Notice of Termination (NOT) from a construction stormwater permit for construction sites greater than 1 acre and after the site has achieved substantial

stabilization. If the site is near filing for a NOT and has achieved substantial stabilization only one inlet inspection is necessary. This inspection will be performed by the EHS Specialist. If any maintenance is necessary and believed to be from construction activities the EHS Specialist will contact the University Project Manager in an attempt to have the contractor resolve the maintenance issue. EHS will contact Husker Energy and Power if necessary to perform any inlet maintenance that is not the responsibility of the contractor.

Inspection Procedure

Be prepared to address issues to inlets and catch basins during the inspection. If an issue is discovered and not resolved during the inspection, create a new work order request that accurately describes what needs to be completed. The inspector(s) should bring the following tools along during the inspection: appropriate PPE, container for collecting trash/debris, manhole puller, camera, shovel, and/or bucket.

Inspectors should conduct the inspection by first assessing and cleaning any trash/debris from the surface inlet grate. Once cleared, visually inspect the interior/exterior structure. If a hazardous substance is suspected, immediately call EHS and await instruction. If no hazardous substance is identified, then removal of trash/debris can commence. If safe to do so, resolve any necessary maintenance items at the time of inspection. Do not clean inlets by “jetting” or flushing with water as this only pushes trash/debris further into the storm sewer system and is a direct violation to the University Stormwater Permit.

No person shall bodily enter any portion of the storm sewer conveyance system without an appropriate confined space permit or evaluation prior to the entry. If bodily entry is necessary, contact the appropriate EHS representative to obtain permission for entry.

All material removed from the inlet must be appropriately stored, protected to prevent runoff, and must not be allowed to reenter the storm sewer conveyance system until discarded to the landfill. Any wastewater that was recovered during the cleaning must be containerized. If there is no reason to believe there is chemical contamination, then the wastewater can be appropriately disposed of to the sanitary sewer. If contamination is present store properly and dispose through EHS. Once the inspection is completed Husker Energy and Power will close any open work order to confirm the inspection has been complete. If the inspection was performed by EHS a record will be kept on file under BMP 6.04 for the respective permit year.

Internal Operating Procedure

CATCH BASIN/INLET INSPECTION FORM (for guidance purposes only, not an auditable checklist) INSPECTOR: DATE:		Weather Conditions: ☐ Dry > 24 hours ☐ Wet																		
Inlet GIS Map Object ID:																				
Work Order System Ticket Number:																				
Inlet Stormwater Awareness Label: ☐ Stencil ☐ Ground Inset ☐ Sign ☐ None ☐ Other _____		Label Condition: ☐ Good ☐ Fair ☐ Poor																		
Inlet Structure Condition: ☐ Good ☐ Fair ☐ Poor ☐ Crumbling Comments:																				
Inlet Maintenance/Problems (Check all that apply & describe below): <table border="0" style="width: 100%;"> <tr> <td>☐ Removal of Vegetation Necessary</td> <td>☐ Unable to Remove Cover/Lid</td> </tr> <tr> <td>☐ Grate is Broken in Need of repair/replace</td> <td>☐ Integrity of Structure is Compromised</td> </tr> <tr> <td>☐ Grate is Clogged (Describe)</td> <td>☐ Sediment Removal Necessary</td> </tr> <tr> <td>☐ Storm Sewer pipe is Blocked</td> <td>☐ Trash Removal Necessary</td> </tr> <tr> <td>☐ Storm Sewer Maintenance is Necessary</td> <td>☐ Organic Debris Removal Necessary</td> </tr> <tr> <td>☐ Frame Maintenance is Necessary</td> <td>☐ Pollutants Present (Describe Characteristics)</td> </tr> <tr> <td>☐ Basin is Undermined or Bypassed</td> <td></td> </tr> <tr> <td>☐ Erosion Around Structure</td> <td></td> </tr> <tr> <td>☐</td> <td></td> </tr> </table>			☐ Removal of Vegetation Necessary	☐ Unable to Remove Cover/Lid	☐ Grate is Broken in Need of repair/replace	☐ Integrity of Structure is Compromised	☐ Grate is Clogged (Describe)	☐ Sediment Removal Necessary	☐ Storm Sewer pipe is Blocked	☐ Trash Removal Necessary	☐ Storm Sewer Maintenance is Necessary	☐ Organic Debris Removal Necessary	☐ Frame Maintenance is Necessary	☐ Pollutants Present (Describe Characteristics)	☐ Basin is Undermined or Bypassed		☐ Erosion Around Structure		☐	
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Other/Description _____																				

Criteria for Inspection: ☐ Catch Basin - Annual ☐ Within 100 feet of Construction Site >1acre ☐ Previous Illicit Discharge Location ☐ Previous Discharge Malfunction Location ☐ Current Discharge Malfunction ☐ Other _____	Sediment Buildup Depth: ☐ None ☐ ¼ full ☐ ½ full ☐ ¾ full ☐ Full	Description of Flow: ☐ Heavy ☐ Moderate ☐ Slight ☐ Trickling ☐ None
If there is flow or standing water present: Observations: Color: _____ Odor: _____		Check for Pollution Indicators: ☐ Foam ☐ Sanitary Waste ☐ Orange Staining ☐ Excessive Sediment ☐ Oil Sheen ☐ Bacterial Sheen ☐ Floatables (Trash) ☐ Pet Waste ☐ Odor ☐ Organic Material (Leafs) ☐ Other _____
Sample Collected for Analysis? ☐ No ☐ Yes - Describe reason for sampling: _____		
Comments (Attach photo if necessary): 		

Internal Operating Procedure

The form above is a sample form to use for Catch Basin and/or Inlet inspections.