

Internal Operating Procedure

BMP 5.04 POST-CONSTRUCTION CONTROL INSPECTION, MAINTENANCE, AND ENFORCEMENT February 2021

I. Introduction & Purpose

The University of Nebraska-Lincoln holds a Small Municipal Separate Storm Sewer Systems General NPDES Permit NER310000 with NDEE. Part IV.B.4.f requires post-construction inspections of all newly installed and implemented permanent Post-Construction Stormwater Control (PCSWCs) at applicable sites to evaluate conformance to UNL approved performance/design standards. Part IV.B.4.d.1 requires the establishment of procedures that assure the PCSWC(s) is/are maintained in perpetuity. This IOP is intended to assist the EHS Staff member complete the PCSWC inspection and communicate helpful information for the establishment of procedures to the department that will be responsible for maintenance.

II. Inspection

The assigned EHS staff must stay in contact with UNL's Project Manager in order to understand when a project is nearing substantial completion and a final inspection of the PCSWC(s) should be conducted. The assigned EHS staff shall assemble and coordinate an inspection team, typically consisting of the A/E, UNLs Landscape and/or Utilities Services representatives, UNLs Project Manager, and the General Contractor.

The purpose of the inspection is to verify that installation of the PCSWC(s) adhere to UNL approved design performance standards for water quality and quantity. If there is doubt or inability to assess the quality of work through visual inspection, a third party test may need to be conducted (e.g., infiltration test, land survey). EHS Staff should use any pictures or visual aid obtained by the contractor or UNL representatives during the construction of the PCSWC(s) to assist with the inspection. Inspections should be conducted with all site specific PCSWC's drawings and the City of Lincoln Drainage Criteria Manual and/or Omaha Regional Stormwater Design manual as a guide to assessing the proper installation of the asset.

In an event where meeting onsite as a group is discouraged (such as during the COVID-19 pandemic) EHS will coordinate an onsite visit alone and report findings in a meeting through virtual conferencing.

If necessary to the project, inspections of stormwater inlets should be conducted concurrently to the Inspection of PCSWC(s). More information about inlet inspections can be found on the EHS IOP *BMP 6.04 Stormwater Inlet and Catch Basin Inspections*.

III. Inspection Report

The EHS Inspector shall draft an inspection report and submit it to the EHS Director (or designee) for review as soon as possible but no later than 48 hours following conclusion of the inspection. Following approval by the Director (or designee), the report shall be transmitted to the inspection team and the Contractor.

The audit report shall clearly and concisely describe each deficiency and include any supporting photos or other documentation. The report shall also contain instruction advising the Contractor that they must provide a formal written response describing corrective actions taken and date(s) implemented. When appropriate, the audit report shall also contain relevant educational and outreach information to assist the Contractor in achieving compliance (e.g., BMP manuals specifications, references to City of Lincoln Drainage Criteria Manual).

The means of transmittal for the inspection report shall be through electronic written communication and require the Contractor's response. The Contractor shall submit formal written responses to all deficiencies that require follow-up through electronic written communication of their choosing (email, cell phone text, UNL e-Builder system, etc.). An Inspection report should still be documented if no deficiencies are found. Upon resolution of all deficiencies in the inspection report the PCSWC(s) is/are accepted and the PCSWC will then be added to the current PCSWC inventory as required by BMP 5.06.

IV. Maintenance

After the Inspection of the PCSWC(s) EHS will document delivery of any operation and maintenance guidance that was established within the Post-Construction Stormwater Control Review (BMP 5.02) and final design/construction documents to the appropriate department(s) (e.g., Landscape Services, Utility Services). The information delivered shall contain schedules and procedures for inspection and maintenance. The schedule of maintenance activities will be uploaded into the appropriate department(s) work order system so that assets are maintained in perpetuity.

UNLs Project Managers submit a Turnover Letter to Maintenance to notify them that contractor warranties are in effect and maintenance responsibilities have been transferred to the responsible department. Warranties typically last one year and will encompass all aspects of the PCSWC(s). While the PCSWC(s) is/are under warranty Landscape Services may begin maintenance of soft scape (plants and turf) after planting to ensure that soft scape is maintained to UNL standards. During the warranty period all performance aspects of the PCSWC are the responsibility of the contractor unless otherwise determined and agreed upon by the responsible UNL department. Once the warranty period is over the responsibility to maintain the PCSWC(s) will fall to the responsible UNL department (e.g., Landscape Services, Utility Services).

V. Enforcement

UNL's Project Manager must take action through contract requirements to correct deficiencies. Often, this is done through final punch list and warranty work. The assigned EHS staff must work with the Project Manager and UNL's Landscape or Utilities Services representative to clearly communicate the deficiencies. UNL will use the Enforcement Response Plan to escalate any deficiencies as required.

VI. Recordkeeping

PCSWC Inspection Reports, Project Punch Lists, and any communication pertinent to the delivery of maintenance information will be recorded in BMP 5.04 of the NPDES permit files for the corresponding year. Inspection worksheets (or equivalent) are for guidance purposes only. EHS Staff will document correspondence with the Contractor regarding the resolution of inspection report deficiencies and/or any actions taken under UNL's Enforcement Response Plan. The UNL Project Manager will facilitate the completion of the punch list at the end of construction. Existing UNL A/E agreement provisions require periodic and final inspection by the Architect to ensure that all work conforms to construction documents. Issuance of a final certificate of completion is also contingent upon the Architect's determination that the work complies with approved design parameters. If the project is in compliance with the approved design parameters the punch list documentation is silent. EHS Staff will review and document any punch list issues that are associated with the performance of the PCSWC(s). EHS will follow up with UNL Project managers to insure any discovered punch list items are resolved and documented.

Post-Construction BMP Inspection

(For guidance purposes only; not intended to be an auditable record)

Site Name: _____

Location: _____

Date: _____ Time: _____ Weather condition: _____

Representatives attending inspection: _____

Type of Post-Construction BMP _____

Inspection Item	Yes No N/A	Comments
Does construction meet appropriate design specifications? (e.g. is infiltration trench correctly proportioned)		
Do elevations appear appropriate for stormwater flow to utilize BMP?		
Is there erosion that indicates problems with design?		
Does the asset drain within the intended time frame (usually within 24-48 hours)?		
Follow up	Comments	
Corrective actions required		
Replacement or repair dates		
Enforcement		
Has a final O&M Plan been received?		
Have final As-builts been received?		
Additional notes/observations/comments:		