

# Internal Operating Procedure

## **BMP 5.02 POST-CONSTRUCTION PLAN REVIEW AND APPROVAL** **February 2021**

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### **I. Introduction**

The University of Nebraska-Lincoln holds a Small Municipal Separate Storm Sewer Systems General NPDES Permit NER310000 with NDEE. The permit requires review and approval of construction plans for all applicable new and redevelopment sites to evaluate conformance to water quality and quantity performance standards. UNL's [Design Guidelines](#) contain UNL's performance standards. All new and redevelopment projects that disturb one half acre or more must meet UNL's Design Guidelines water quality and quantity standards.

The Post-Construction Stormwater Control (PCSWC) Review Form that is attached to this IOP (Attachment A) was created to assist the A/E in communicating the stormwater performance standards that will be achieved at a particular site with the specifically chosen PCSWCs. The [UNL PCSWC Review Form](#) can be filled out and submitted online at the Facilities Planning and Construction (FPC) Design Guideline webpage by the A/E. Alternatively, the form can also be downloaded from the [UNL Stormwater Management](#) website and submitted via email to [stormwater@unl.edu](mailto:stormwater@unl.edu).

### **II. Plan Review**

During the schematic design phase EHS staff should communicate with UNL's Project Manager and attend design meetings. These meetings should be used to collaborate with UNL's project management team and Civil Engineer to discuss possible site constraints, identify possible PCSWC design elements, and possible operation and maintenance considerations. EHS Staff should aim to introduce the PCSWC Review Form and stormwater standard requirements to UNL Project Managers and the A/E at this time. The stormwater standards and details regarding the required calculations and narrative for water quality and quantity are referenced on the Storm Water Drainage System – UNL Lincoln Campus design guideline. The design guideline can be viewed online at the FPC website, under the Policies, Procedure, & Guidelines tab; click Design Narratives, Utilities Narratives, and then the Storm Water Drainage System-UNL Lincoln Campus.pdf.

The UNL PCSWC Review form should be distributed by EHS no later than the schematic design review stage so that UNL Project Managers and A/Es have enough time to respond to review inquiries without compromising project schedules. The EHS staff member must regularly check the status of projects that have triggered stormwater

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performance standards through continuous contact with UNL Project Managers and attending campus planning meetings. E-builder can assist in project status updates but should not be solely relied upon for these updates or new project notification.

UNL's FPC Department may send out a design review request through e-Builder at approximately the 60% design completion mark. At this time the assigned EHS staff member shall review the PCSWC Review Form and construction drawings to determine if the design guidelines have been met and if the PCSWC(s) has/have been designed to the appropriate design standards such as the City of Lincoln Drainage Criteria Manual or the City of Omaha post-construction manual. As necessary, EHS will confer with others (e.g., Civil Engineer, Utilities, Landscape Services, etc.). EHS Staff shall document all questions, comments, or modification requests by email or in the design review comments spreadsheet (sent with the design review request) and send back to UNL's Project Manager and the A/E in an attempt to complete the review and approval process as close to the 60% design review stage as possible.

### **III. Plan Approval**

EHS Staff should aim at completing the approval as close to the 60% design review stage as possible since significant design changes during the 95% design stage can be burdensome to the project. UNL's FPC Department will send out a design review request through e-Builder at approximately the 95% design completion mark. The EHS Specialist will review the 95% design documents and the A/E response to verify any required modifications or requests for clarification have been made.

Approval shall be made by email or within the design review comments spreadsheet and sent back to UNL's Project Manager and the A/E. EHS Staff will communicate with UNL Project Managers and A/E through email when additional questions or comments are necessary to complete the design review for the selected PCSWC(s). EHS should monitor any approved PCSWC plan throughout all remaining design stages to ensure that substantial changes to the design are incorporated. EHS will communicate to the A/E and UNL Project Manager that major changes to the PCSWC plan must be submitted in writing by the A/E and approved by UNL. The approved plan must remain updated and may need to be resubmitted if major modifications of previously approved plans occur.

### **IV. Documentation**

Documentation for the purposes of complying with the BMP 5.02 NPDES permit obligation shall not be restricted to e-builder communication. E-builder is an additional tool that is used for EHS staff to be alerted when projects trigger stormwater performance standards and when various design review stages are open for comment. Requests for modifications, comments, and questions regarding the Post-Construction Stormwater Control approval and review may be communicated through e-builder or

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other means of communication (e.g., email, phone logs, meeting agendas/minutes). Relevant communication regarding the review and approval process will be maintained by EHS Staff within BMP 5.02 NPDES permit files for the applicable year and project.

## **V. Deviations from UNL's Design Guidelines**

Deviations from UNL's Design Guidelines requires submittal of a Design Guideline Waiver form (as described at <https://facilities.unl.edu/design-guideline-waiver-request>). If UNL's Design Guidelines for water quality or water quantity will not be met as demonstrated by the A/E submittal then, the A/E must submit a design guideline waiver. The waiver must contain a detailed narrative describing why the project is unable to meet the provisions of the stormwater standards and yet still achieves a design that controls storm water runoff to the maximum extent practicable. The design guideline must describe any technical constraints and how the site will maintain no detriment to the receiving water or nearby affected properties after development.

## Attachment A – Post-Construction Stormwater Control Review Form

UNL requires that the Architect/Engineer prepare and submit relevant stormwater calculations and narratives relative to Post-Construction Stormwater Controls (PCSWCs) for all new development or significant redevelopment projects on the UNL City and East Campuses that disturb land in excess of 1/2 acre in size. Calculations and narrative shall be provided to FPC and EHS at the beginning stages of the design process. Fill out the appropriate sections of this document and attach any applicable information (e.g. site plans, drainage area summaries) regarding any Low Impact Development (LID) or Best Management Practices (BMPs) being used. PCSWCs must provide water quality to no less than the first one half inch of runoff from the site and water quantity control to the maximum extent practicable. Refer to the Storm Water Drainage Systems – UNL Lincoln Campus design guidelines for stormwater standards and details to the requirements. BMPs and calculations shall conform to the City of Lincoln Drainage Criteria Manual, Chapter 8, Stormwater Best Management Practices.

<b>PCSWC Information: SUBMIT via email to: <a href="mailto:stormwater@unl.edu">stormwater@unl.edu</a></b>	
UNL Project Number: _____ Campus: _____ Project Name: _____ Address: _____ _____ _____	Submitted by: _____ Company: _____ Email: _____ Phone Number: _____ Date submitted: _____ Estimated Projected start: _____
<b>Site Area Detail:</b>	
Total Site Area (acres) <input style="width: 150px;" type="text"/>	
Disturbed Area (acres) <input style="width: 150px;" type="text"/>	Undisturbed Area (acres) <input style="width: 150px;" type="text"/>
<b>Pre-Construction</b>  Impervious Area <input style="width: 150px;" type="text"/>  Pervious Area <input style="width: 150px;" type="text"/>	<b>Post-Construction</b>  Impervious Area <input style="width: 150px;" type="text"/>  Pervious Area <input style="width: 150px;" type="text"/>
Was a waiver requested for the site? (Circle one, If yes please explain) (YES) (NO) _____ _____ _____	
Attach waiver request to this document if applicable.	

**Water Quality:**

Prepare and submit calculations and narrative of the amount of water captured and treated on-site by the specifically selected PCSWC(s). The site is required to capture and treat the first one half inch of stormwater runoff from the site. Use the WQCV equation described in City of Lincoln Drainage Criteria Manual, Chapter 8, Stormwater Best Management Practices to determine the required storage volume.

Required Storage Volume:  Storage Volume Provided:

Is the Water Quality storage volume provided by the PCSWC greater than the required storage volume. (YES) (NO)

**Water Quantity:**

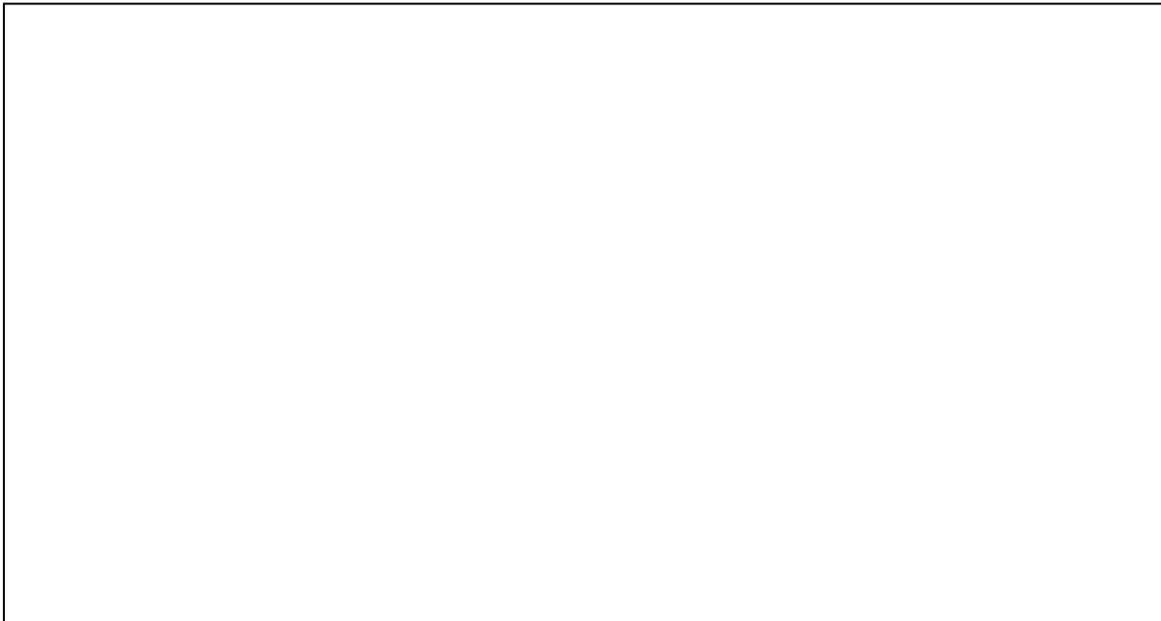
Prepare and submit a narrative describing the key elements for post-development flow control and any relevant data or calculations that compare and contrast pre- and post-development site hydrology characteristics. Consideration should be given to the 2-, 10- and 100-year storm events.

**Plan Review:**

Narrative description and use of each proposed post-construction structural stormwater controls, and, if applicable a description of any site constraints that prohibit achievement of UNL's Design Guideline standards for water quality and/or quantity.

A large, empty rectangular box with a thin black border, intended for a narrative description of post-construction structural stormwater controls and site constraints.

Description of design standards relating each proposed post-construction storm water control to the City of Lincoln Drainage Criteria Manual, Chapter 8, Stormwater Best Management Practices City of Lincoln.

A large, empty rectangular box with a thin black border, intended for a description of design standards relating stormwater controls to the City of Lincoln Drainage Criteria Manual.

Estimates of post-construction structural stormwater controls lifespan and operation and maintenance costs. Identify any specialized equipment that is necessary or that would need access to maintain the PCSWC in perpetuity.

A large, empty rectangular box with a thin black border, intended for the user to provide estimates of post-construction structural stormwater controls lifespan and operation and maintenance costs, and to identify any specialized equipment necessary for maintenance.