

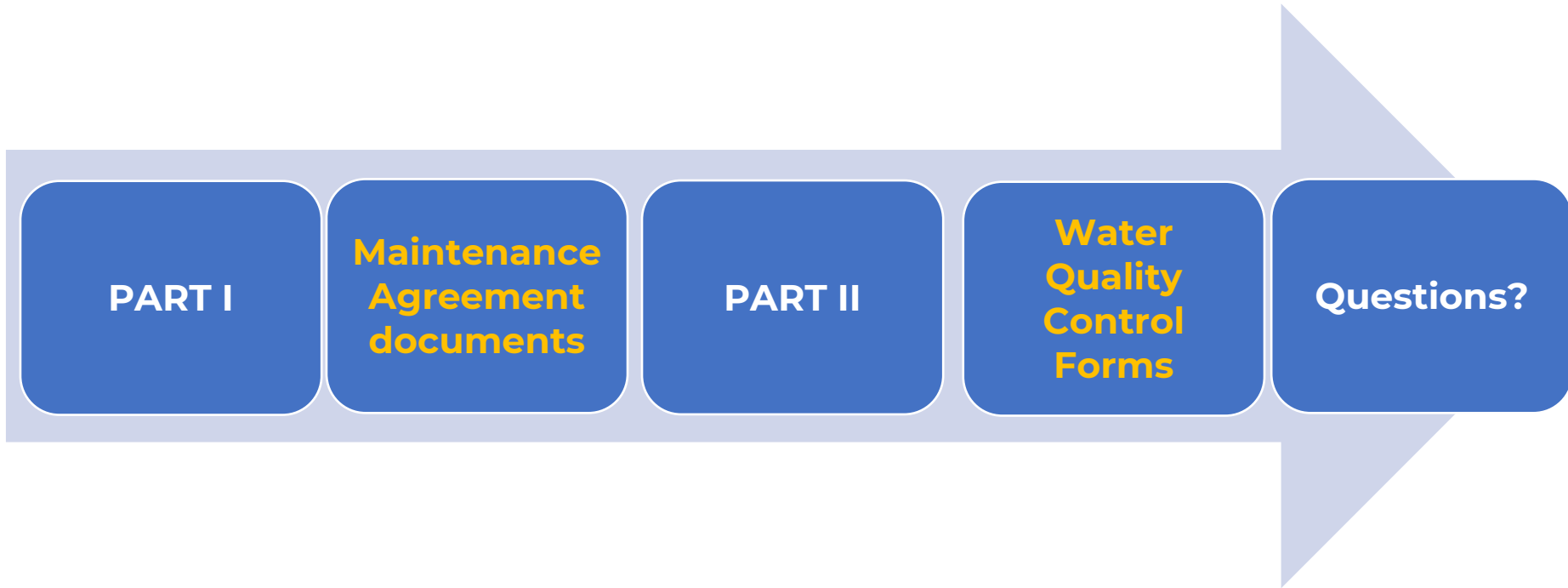


POST CONSTRUCTION BMP MAINTENANCE AGREEMENTS AND WQC DOCUMENTATION

STORMWATER/E&SC SEMINAR
MUSEUM OF SPEED
JANUARY 25, 2024

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Engineer, LTU Watershed Management

Overview of presentation



Part I



MAINTENANCE AGREEMENTS

Maintenance Agreements


- Search: 'Water Quality Standards'
- Forms section
- Template Post Construction Stormwater Maintenance Plan Agreement

ities/Watershed-Management/Requirements-and-Procedures/Water-Quality-Standards

City Information / Departments / Transportation and Utilities / Utilities / Watershed Management / Requirements and Procedures / **Water standards**

Water Quality Standards

City of Lincoln and the Lower Platte South Natural Resources District developed a Clean Water Program to identify the actions needed to improve the quality of stormwater runoff from developed (post-construction) areas to at minimum, state standards.



The program is part of a nationwide effort to control the harmful effects of pollutants from developed areas on our nation's waters. Continued development of land creates more hard (impervious areas) like roads, parking lots, sidewalks, and rooftops. When rain or snow on vegetated land, most of it seeps into the ground, however, when this stormwater lands on surfaces, the runoff picks up sediment, nutrients, road salts, heavy metals, bacteria, oil or pollutants that deteriorate the water quality of lakes and streams.

ADOPTED REGULATIONS

- [LMC Chapter 28.03 Regulations for Post Construction Stormwater Management](#)
- [Flood and Water Quality Protection Manual Chapter 8 Post-Construction Best Management Practices](#)
- [Design Standards - Chapter 2.05 Stormwater Drainage](#)

FORMS

- [Water Quality Control Form \(PDF, 257KB\)](#)
- [Request for Waiver to Chapter 28.03 \(PDF, 289KB\)](#)
- [Request for Approved Alternative to Chapter 28.03 \(PDF, 35KB\)](#)
- [Template Post Construction BMP Certification Form \(PDF, 80KB\)](#)
- [Template Post Construction Stormwater Management Plan Agreement \(print out single sided to send in\) \(DOCX, 30KB\)](#)

Agreement Requirements

- The verbiage of the document should not change
- The only segments that are variable are highlighted
- Additional pages that are required include the following:
 1. Plan sheet showing the location and details of the Water Quality BMP
 2. Maintenance plan table with **SCHEDULE OF EVENTS**
 3. BMP Certification Form

AGREEMENT LEGAL DOCUMENT

The paragraphs of the legal agreement will always remain the same. The City of Lincoln Law Department reviews the document to ensure it's compliance.

STORMWATER MANAGEMENT PLAN MAINTENANCE AGREEMENT AND EASEMENT

WHEREAS, {owner} is the owner of {legal description}, Lincoln, Lancaster County, Nebraska ("Property");
and

WHEREAS, {owner} shall be referred to hereinafter as the "Property Owner", and its administrators, executors, successors, heirs and assigns, shall hereinafter be referred to collectively as the "Successors";
and

WHEREAS, the City of Lincoln, Nebraska (hereinafter the "City") requires, and the Property Owner agrees that the health, safety and welfare of the citizens of the City require that stormwater management facilities (hereinafter referred to as the "facilities") must be constructed and perpetually maintained on the Property.

NOW, THEREFORE, in consideration of the foregoing premises, the covenants contained herein, and the following terms and conditions, the Property Owner agrees as follows:

1. The Property Owner shall construct the facilities at its sole expense, in strict accordance with the {name of drainage plan} attached as Exhibit A (the "Drainage Plan"), which has been reviewed and approved by the City. Upon construction completion, all stormwater BMPs that are part of this Post Construction Stormwater Management Plan shall be certified by a licensed professional civil engineer or other professional approved by the City of Lincoln Transportation and Utilities Department. The following must be included with the certification attached as Exhibit C: A Best Management Practice (BMP) certification document and Record Drawing of the final Post Construction Stormwater Management Plan with "As-Built" stamp, date, and signature of the licensed professional. Any change in the function of the BMP, such as volume, capacity, release rate, etc. must be verified and documentation included with the Record Drawing.

WHEREAS, {owner} is the owner of {legal description}, Lincoln, Nebraska ("Property");
and

WHEREAS, {owner} shall be referred to hereinafter as the "Property Owner", and its administrators, executors, successors, heirs and assigns, shall hereinafter be referred to collectively as the "Successors";
and

WHEREAS, the City of Lincoln, Nebraska (hereinafter the "City") requires, and the Property Owner agrees that the health, safety and welfare of the citizens of the City require that stormwater management facilities (hereinafter referred to as the "facilities") must be constructed and perpetually maintained on the Property.

NOW, THEREFORE, in consideration of the foregoing premises, the covenants contained herein, and the following terms and conditions, the Property Owner agrees as follows:

1. The Property Owner shall construct the facilities at its sole expense, in strict accordance with the {name of drainage plan} attached as Exhibit A (the "Drainage Plan"), which has been reviewed and approved by the City. Upon construction completion, all stormwater BMPs that are part of this Post Construction Stormwater Management Plan shall be certified by a licensed professional civil engineer or other professional approved by the City of Lincoln Transportation and Utilities Department. The following must be included with the certification attached as Exhibit C: A Best Management Practice (BMP) certification document and Record Drawing of the final Post Construction Stormwater Management Plan with "As-Built" stamp, date, and signature of the licensed professional. Any change in the function of the BMP, such as volume, capacity, release rate, etc. must be verified and documentation included with the Record Drawing.

OWNER



THE OWNER IS THE LEGAL OWNER OF THE PARCEL(S) ON WHICH THE “BMP” IS LOCATED.

- This is not to be the person responsible for maintenance unless the owner is the responsible charge of maintenance. The owner is the ultimately liable for maintenance, not the designate.
- Needs to be the LEGAL name
- If it is a business, then include the legal form of business, (i.e., LLC)
- Must include each of the Responsible Owners if there are multiple owners of the property

Legal Description

- This is to be the description of the lot(s) where the BMPs are located.
- This is not to be the Subdivision name alone, but the Subdivision Name should be included if it is part of the Legal. If the Legal is a Township and Range, it must be the entire legal description of the Lot.
- If there are multiple BMPs, then each lot should be included.

Name of Drainage Plan

THIS IS SIMPLY THE NAME OF THE OVERALL DRAINAGE PLAN DOCUMENT THAT IS BEING USED FOR THE PLAN SHEET THAT IS “Exhibit A”.

- The name of the plan sheet and the drainage plan should match. The plan sheet should include the Lot information to match the legal description.

Signature page

- Property Owner must be a legal representative of the OWNER from the agreement.
- The STATE and COUNTY need to be the location of the OWNER, not the property
- Notary is REQUIRED

Signature page

- The Agreement **MUST BE SIGNED** before any permits can be approved for a single business development.
- The Agreement **MUST BE SIGNED** before the **FINAL PLAT** can be approved for a multi-lot development.
- There are no exceptions to this. A CSW permit may be authorized prior to signing, but an agreement must be submitted for review before that approval will be granted.

Maintenance Plan

- Needs to include all the necessary tasks that are needed to maintain the BMP to WORK AS DESIGNED.
- This will be the same plan that is part of the WQC form.
- Needs to include a SCHEDULE OF ACTIVITIES
- Needs to be achievable by the owner. Provide sufficient information for the owner to know how to maintain the BMP and assure success. A plan is only as good as its outcome.

Schedule of Activities:

REQUIRED: Narrative

NOTE: Post construction maintenance of inlet filters should occur 4 times per year. Inspections shall also need to occur before and after snowfall season. During inspection the owner shall dispose of any sediment or debris. Alternatively, an industrial vacuum may be used to collect accumulated sediment or debris. If the filter bag is torn or punctured to ½” or greater in size at the bottom of the bag, bag shall be replaced.

Inspection Date:

Inspection By:

Site Conditions:

Date of Previous Inspection:

Inspection Activity	Maintenance Needed	Description of Required Maintenance Activity	Date Maintenance Completed
Follow manufacturer instructions for maintenance			
Remove debris, including any floating debris			
Check inlets and outlets for clogging and repair needs			
Check for any necessary repairs			

Schedule of Activities: Two Options

Optional
but very helpful:
Table Column

Hydrodynamic Separator	Frequency	Maintenance Needed	Description of Required Maintenance Activity	Date Maintenance Completed
Inspect sediment and oil depth using a probe or pole to measure the depth of sediment accumulation	Quarterly			
Remove oil and floatables by vacuum truck	As-Needed			
Remove sediment by vacuum truck prior to 8" of sediment accumulation	As-Needed			
Submit annual inspection report to NPDES@lincoln.ne.gov	Annually			

* Some activities will need to be done more frequently during the first few years. See attached manufacture's inspection and maintenance guide for more information.

Manufacturer's Shop Drawings

Cascade Separator® Inspection and Maintenance Guide

- If using a proprietary device, include the shop drawings, with specifications and maintenance plan.
- The manufacturer's maintenance plan/schedule can be substituted for the Maintenance Table but must include the contact information for the responsible charge.

Bmp certification

- This document is included with the template for the Maintenance agreement, but there is also a fillable form available on the webpage.
- Needs to be filled out **as much as possible** with the agreement that will be submitted to the Lancaster County Assessor.
- It is understood that the As-built portion will be left incomplete. It is to be completed and submitted to obtain the surety release and terminating the CSW Permit.

Post Construction BMP Certification

(Complete form and send with the as-built plan to NPDES@lincoln.ne.gov after BMP is constructed)

Project Name:
Project Address:
BMP Type:
Contractor Company (who installed BMP):

CERTIFICATION STATEMENT

This certification must be executed by a licensed professional civil engineer, Surveyor, or other professional approved by the City of Lincoln.

Based upon my inspection of the constructed BMP(s) for the above-referenced project, I hereby certify that the BMP(s) are in compliance with the intent of the original city approved design plans and with the City of Lincoln's post construction stormwater management requirements.

Name (Signature): Date:

Name (Printed):

Email Address:

Company Name:

Provide the following information on who will be responsible for ongoing maintenance:

Person Responsible for BMP Maintenance

Name:

Company Name:

Address:

Telephone Number:

Email:

Review and inspection of the BMP(s) shall be done by a qualified individual who is knowledgeable in the principles and practices of post construction stormwater control.



PART II

WATER QUALITY CONTROL FORM

WATER QUALITY CONTROL FORMS

- Search: 'Water Quality Standards'
- Forms section
- Water Quality Control Form


partments/LTU/Utilities/Watershed-Management/Requirements-and-Procedures/Water-Quality-Standards

Home / City Information / Departments / Transportation and Utilities / Utilities / Watershed Management / Requirements and Procedures / Water Quality Standards

Water Quality Standards

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This program is part of a nationwide effort to control the harmful effects of pollutants from urbanized areas on our nation's waters. Continued development of land creates more hard surfaces (impervious areas) like roads, parking lots, sidewalks, and rooftops. When rain or snow falls onto vegetated land, most of it seeps into the ground, however, when this stormwater lands on hard surfaces, the runoff picks up sediment, nutrients, road salts, heavy metals, bacteria, oil and other pollutants that deteriorate the water quality of lakes and streams.



ADOPTED REGULATIONS

- LMC Chapter 28.03
Regulations for Post Construction Stormwater Management
- Flood and Water Quality Protection Manual Chapter 8
Post-Construction Best Management Practices
- Design Standards - Chapter 2.05
Stormwater Drainage

FORMS

- Water Quality Control Form (POI: 23748)
- Request for Waiver to Chapter 28.03 (POI: 28849)
- Request for Approved Alternative to Chapter 28.03 (POI: 33482)
- Template Post Construction BMP Certification Form (POI: 8046)
- Template Post Construction Stormwater Management Plan Agreement (POI: 3948)
print out single sided to send in (POI: 3948)

WQC Form's purpose

The form is used by the LTU Watershed Management staff:

- When they are doing their inspections of the PCBMP's
- When they are reviewing the design for approval.
- To be kept by the owner to create a report for the BMP maintenance.

Water Quality Control Form

For Owner Use

Project Name: _____

Location: _____

Name of Subdivision (If applicable): _____

Structural Best Management Practice Type: _____

Project Engineer: _____ **Engineer Email:** _____

Owner Contact Information

Name: _____

Address: _____

Phone Number: _____ **Email:** _____

Person Responsible for Maintenance

Name: _____

Company name: _____

Address: _____

Phone Number: _____ **Email:** _____

Project Type (select one)

Development Redevelopment

Project Variation (check if applicable and attach appropriate form)

Waiver Approved Alternative

Water Quality Control Volume

Relevant Storm Event (inches): _____

Percent Impervious Area (%): _____

Contributing Drainage Area (acres): _____

Water Quality Control Design Volume (acre/ft): _____

$WQCV = P \times (0.05 + 0.009 \times I) \times A \times I / 12$

Volume of treatment for Structural BMP (acre/ft): _____

Attach Site Plans, Maintenance Plan, and other relevant information (e.g. non structural BMP or non volume activities/descriptions if applicable. Include maximum elevation of Water Quality Control Volume as well as other pertinent outlet control elevations).

FOR STAFF USE

- Reviewer Name: _____

- Date Received: _____ Date Reviewed: _____

- Planning Building and Safety Number: _____

- Instrument Number of Owner Agreement: _____

- Plans and Maintenance Plan Attached? Y N

- Notes: _____

Information required

The following items are necessary for acceptance and approval:

- Project information is critical for documentation
- All the contact information is required for the Person Responsible for Maintenance
- Project Type and Variation (if used)
- The criteria for the design
 - The design volume and treatment volume are not necessary for BMP's that are based on flow rate.
 - For these include the flowrate where the volume is indicated

Water Quality Control Form

For Owner Use

Project Name: _____

Location: _____

Name of Subdivision (If applicable): _____

Structural Best Management Practice Type: _____

Project Engineer: _____ **Engineer Email:** _____

Owner Contact Information

Name: _____

Address: _____

Phone Number: _____ **Email:** _____

Person Responsible for Maintenance

Name: _____

Company name: _____

Address: _____

Phone Number: _____ **Email:** _____

Project Type (select one)

Development Redevelopment

Project Variation (check if applicable and attach appropriate form)

Waiver Approved Alternative

Water Quality Control Volume

Relevant Storm Event (inches): _____

Percent Impervious Area (%): _____

Contributing Drainage Area (acres): _____

Water Quality Control Design Volume (acre/ft): _____

$WQCV = P \times (0.05 + 0.009 \times I) \times A \times 1/12$

Volume of treatment for Structural BMP (acre/ft): _____

Attach Site Plans, Maintenance Plan, and other relevant information (e.g. non structural BMP or non volume activities/descriptions if applicable. Include maximum elevation of Water Quality Control Volume as well as other pertinent outlet control elevations).

FOR STAFF USE

- Reviewer Name: _____

- Date Received: _____ Date Reviewed: _____

- Planning/Building and Safety Number: _____

- Instrument Number of Owner Agreement: _____

- Plans and Maintenance Plan Attached? Y N

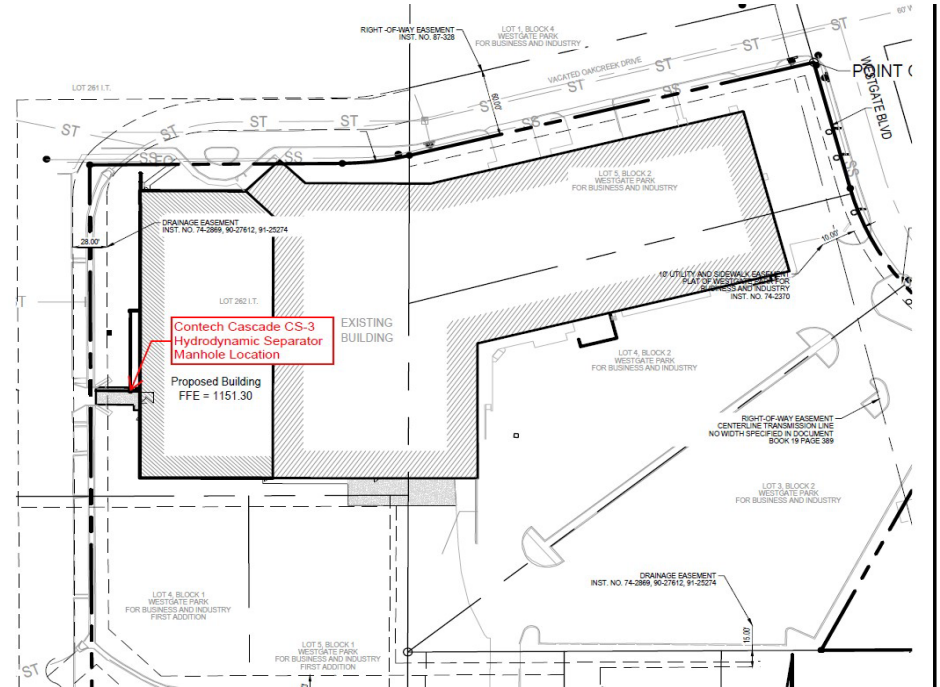
- Notes: _____

Supporting documents

MUST BE INCLUDED

- Plan sheet with PCBMP details. **Highlight** the structure's location on the plan

** When choosing a PCBMP, keep in mind the accessibility for maintenance. If a vac truck can't access a separator, how is it going to be cleaned?



Supporting documents

MUST BE INCLUDED

- Maintenance form from the Maintenance Agreement.

NOTE: Post construction maintenance of inlet filters should occur 4 times per year. Inspections shall also need to occur before and after snowfall season. During inspection the owner shall dispose of any sediment or debris. Alternatively, an industrial vacuum may be used to collect accumulated sediment or debris. If the filter bag is torn or punctured to ½” or greater in size at the bottom of the bag, bag shall be replaced.

Inspection Date:

Inspection By:

Site Conditions:

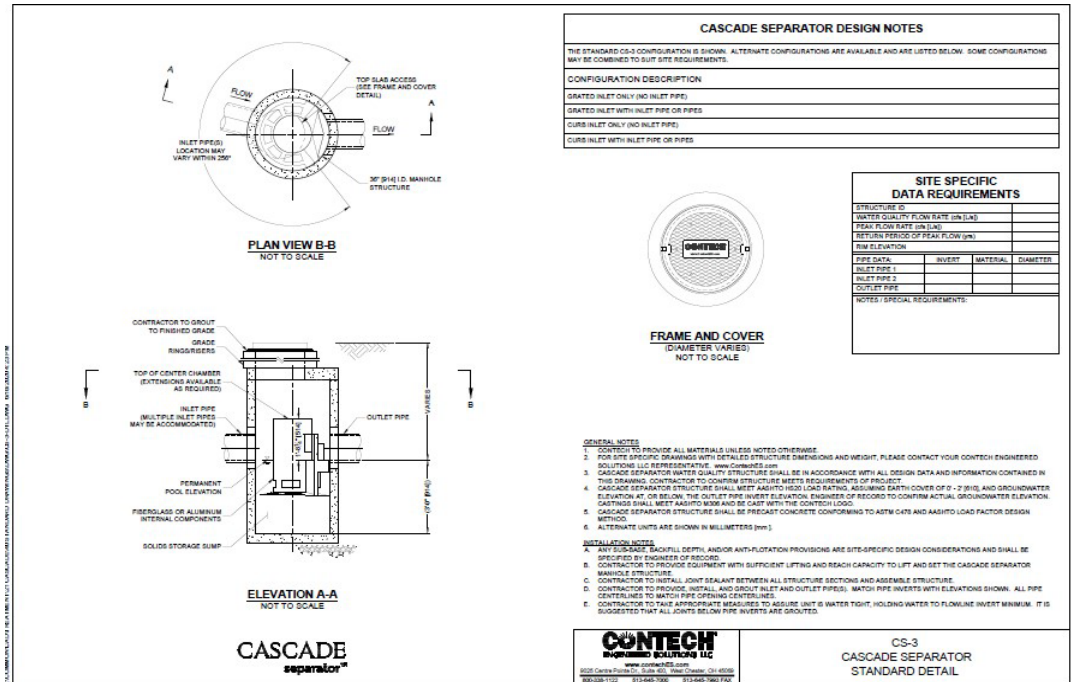
Date of Previous Inspection:

Inspection Activity	Maintenance Needed	Description of Required Maintenance Activity	Date Maintenance Completed
Follow manufacturer instructions for maintenance			
Remove debris, including any floating debris			
Check inlets and outlets for clogging and repair needs			
Check for any necessary repairs			

Supporting documents

MUST BE INCLUDED

- Shop Drawings if BMP is a proprietary device.





Additional information

Revised Agreements

- Must go through the entire review and approval process again.
- Depending on the extent of the revision, may need to revise the WQC document.



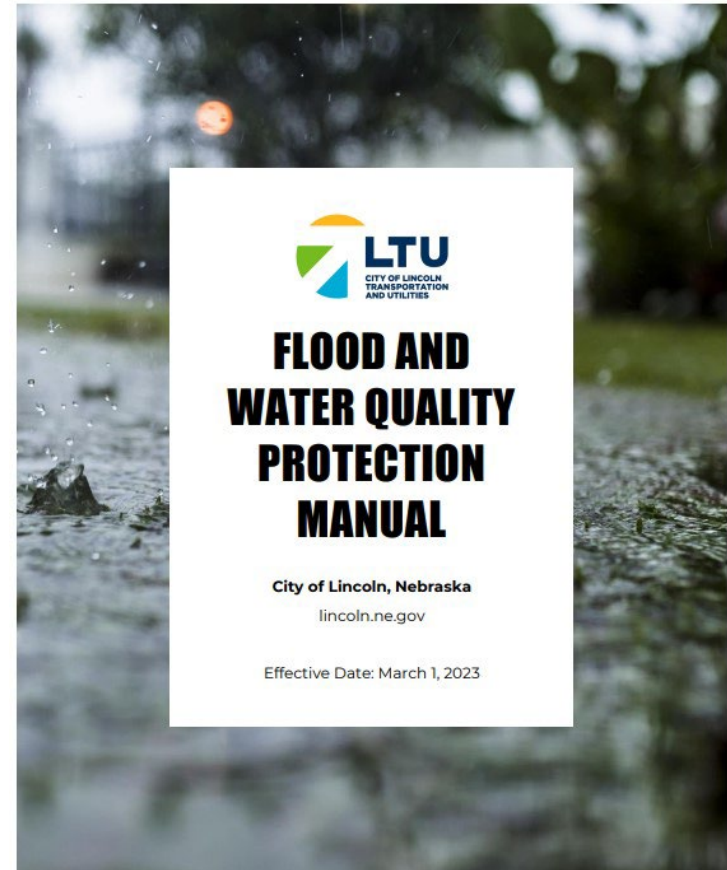
Returned to owner/rep for revisions

- Missing documents- did not include all the necessary documents in the MA or WQC form.
 - You must submit each document as a completed PDF. Do not assume that our staff is going to assemble the document for you.
- Unauthorized revisions to the agreement language.
 - Do not change the agreement language without prior permission from City of Lincoln Law Department.
 - Contact LTU Watershed Engineering Staff before submitting for approval.
 - mmiddendorf@lincoln.ne.gov
- Incorrect/unauthorized signatures or missing notarizations.

Design guidelines

Consider using an approved PCBMP before heading down the alternative route.

- Chapter 8 of the manual has all the design considerations/calculation for approved BMP's
- Appendices A- Approved Methods
- Appendices B- Maintenance Requirements



Authority

If you need additional information for knowing what is required by code and what gives our staff the authority to enforce our regulations- see

City of Lincoln Municipal Code –
CHAPTER 28

**KNOW YOUR RIGHTS,
KNOW YOUR RESPONSIBILITIES**

LINCOLN MUNICIPAL CODE

TITLE 28 STORMWATER QUALITY AND EROSION AND SEDIMENT CONTROL

Chapter 28.03 REGULATIONS FOR POST CONSTRUCTION STORMWATER MANAGEMENT

Contents:

- 28.03.010 Purpose and Findings.
- 28.03.020 Authority and Applicability. •
- 28.03.030 Definitions.
- 28.03.040 Requirement.
- 28.03.050 Post Construction Stormwater Management Procedures.
- 28.03.060 Post Construction Stormwater Management Plan.
- 28.03.070 Waivers.
- 28.03.080 Maintenance.
- 28.03.090 Replacement.
- 28.03.100 Credits.
- 28.03.110 Right of Entry.
- 28.03.120 Unlawful Acts.
- 28.03.130 Notice of Violation.
- 28.03.140 Penalties.
- 28.03.150 Appeals.
- 28.03.160 Severability.

QUESTIONS?



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402-441-4955



lincoln.ne.gov/watershed



END OF PRESENTATION