

GUIDANCE DOCUMENT:

**POST-CONSTRUCTION
STORMWATER
MANAGEMENT PLAN FOR
COMPLIANCE WITH
CHAPTER 71**



Post-Construction Stormwater Management Plan for
ABC DEVELOPMENT

Project Owner/Developer: **TOWN OF OLD ORCHARD BEACH**

Plan Prepared By: **OOBENG**



July 2018

(Include original date and applicable revision dates)

INTRODUCTION

This Guidance Document was developed to provide the applicant with direction on the required elements of a Post-Construction Stormwater Management Plan.

The purpose of a Post-Construction Stormwater Management Plan is to identify all post-construction best management practices (BMPs), both non-structural BMPs and stormwater facilities, used onsite, and to outline the long-term operation and maintenance procedures of the post-construction BMPs. A Post-Construction Stormwater Management Plan should guide the responsible party for maintenance as to what to inspect, when to complete inspections, and how to maintain the post-construction BMPs. Additionally, a Post-Construction Stormwater Management Plan should guide the qualified post-construction stormwater inspector as to what to inspect during an annual certification and whether the post-construction BMPs comply with the Post-Construction Stormwater Management Plan.

If you have any questions on the provided guidance or required elements of a Post-Construction Stormwater Management Plan, please contact the Planning Department:

Mike Foster, Assistant Town Planner

Email: mfoster@oobmaine.com

Phone: 207-937-5636

GUIDANCE DOCUMENT ELEMENTS

1. PROJECT CONTACT INFORMATION

- a. Project Name and Location
- b. Contact Information

2. PROJECT DESCRIPTION

- a. Project Summary
- b. Stormwater Management Summary
- c. Applicable State and Federal Permits Required by Project
- d. Demonstration of compliance with Maine DEP Chapter 500 Stormwater Management (if applicable)

3. STORMWATER MANAGEMENT

- a. Listing of Site-Specific Post-Construction BMPs
- b. Inspection and Maintenance Procedures for Post-Construction BMPs
- c. Inspection and Maintenance Form or Log
- d. Signed Maintenance Agreement

4. LIST OF POST-CONSTRUCTION BMPS WITH DESIGNATION ON THOSE THAT DISCHARGE TO THE MS4

5. ANNUAL CERTIFICATION

APPENDICES

- A Reference Documents**
- B Sample Maintenance Agreement**
- C Sample Annual Certification**

1. PROJECT CONTACT INFORMATION

This section should include general project information, including the project name, physical location, and watershed. It should also include contact information for the Owner, Engineer, and responsible party for maintenance and/or inspection of stormwater BMPs and any other relevant contacts.

a. Project Name and Location

Project name

Project location/address

Watershed

b. Contact Information

Owner and/or Developer

(Name, address, telephone #, email)

Design Engineer

(Name, address, telephone #, email)

Responsible Party Responsible for Maintenance of Stormwater BMPs

(Name, address, telephone #, email)

Responsible Party Responsible for Inspection of Stormwater BMPs

(Name, address, telephone #, email)

Other Relevant Parties

(Name, address, telephone #, email)

2. PROJECT DESCRIPTION

This section shall include a narrative of how the stormwater is handled onsite, including a description of how stormwater is conveyed and/or treated and where various areas discharge to. This section shall also demonstrate the project's compliance with any required Maine Department of Environmental Protection Chapter 500 Stormwater Management permit.

This section is also intended to capture State and Federal permits that may be required on a project, such as Maine DEP Chapter 500 Stormwater Management permit, the Maine Construction General Permit (MCGP), Maine DEP Natural Resource Protection Act (NRPA) permit or Army Corps of Engineers (ACOE) permit. It is the responsibility of the developer to determine which permits are required. Permits applied for and/or issued should be listed in this section of the Post-Construction Stormwater Management Plan. If copies of permits and/or conditions of approval are available, they shall be included as an appendix to the Post-Construction Stormwater Management Plan.

The following points should be addressed in this section:

a. Project Summary

- Existing site Conditions
- Site Improvements (buildings, parking, site amenities, etc.)
- Project use and anticipated operations (residential, commercial, mowing, plowing, etc.)
- Utilities (i.e. private/public sewer, water)

b. Stormwater Management Summary

- Pre- and post-development drainage patterns
- Stormwater conveyance, management, and treatment
- Discharge locations
- Figure identifying location and ID of stormwater facilities (structural BMPs)

c. Applicable State and Federal Permits Required by Project

d. Demonstration of compliance with Maine DEP Chapter 500 Stormwater Management (if applicable)

3. STORMWATER MANAGEMENT

This section should include a site-specific description of each of the BMPs and stormwater facilities onsite (collectively referred to as post-construction BMPs), and include the following:

- List of site-specific BMPs (non-structural practices).
- List of site-specific stormwater management facilities to be inspected and maintained.
- Site-specific maintenance procedures, including frequency, for areas where BMPs (non-structural practices) will be employed, such as snow storage areas.
- Site-specific inspection and maintenance procedures, including frequency, for all proposed stormwater management facilities.
- A site-specific form or log to document inspections, maintenance, and corrective action taken.
- A description of how, when, and by whom recommended or required maintenance or repairs should be accomplished.

The following document(s), included in Appendix A, may help in preparation of this section:

- Memorandum: Clarification on Post-Construction Management Plans and Inspections (For Interested Parties)
- Post-Construction Management Plan Review Checklist

This section should also include a copy of an executed maintenance agreement for the project. An example maintenance agreement is included in Appendix B.

Hard copies and electronic copies of each of these documents are available in the Planning office.

4. LIST OF POST-CONSTRUCTION BMPS WITH DESIGNATION ON THOSE THAT DISCHARGE TO THE MS4

This section shall list each post-construction BMP on site, where they discharge to, whether they discharge to the Town’s municipal separate storm sewer system (MS4), and who is responsible for the maintenance of the post-construction BMP. This shall be done in a tabular format and be included under this section of the Post-Construction Stormwater Management Plan.

Table Example:

POST-CONST. BMP ID	TYPE OF POST-CONST. BMP	DISCHARGE LOCATION	MS4 (YES/NO)	INSPECTION FREQUENCY	POST-CONST. REQUIREMENT	POST-CONST. RESPONSIBILITY
ABC-1	Vegetated Soil Filter (VSF-A)	On-site wetland complex	No	Biannual	Annual Certification	Owner
ABC-2	Level Lip Spreader (LLS-A)	On-site wetland complex	No	Annual	Annual Certification	Owner
ABC-3	24-inch Culvert – ABC Way (STA 7+50)	XYZ Ave Drainage Ditch	Yes	Annual	Annual Certification	Owner
ABC-4	Wet Pond	On-site wetland complex	No	Biannual	Annual Certification	Owner
ABC-5	Lot 4- Roof Edge Drip Line	Wet pond	No	Annual	Annual Certification	Owner
ABC-6	Paved Areas	XYZ Ave Drainage Ditch	Yes	Annual	Annual Certification	Owner
ABC-7	Parking Lot Sweeping	N/A	N/A	N/A	N/A	Owner

5. ANNUAL CERTIFICATION

This section shall include information regarding the requirement for an annual certification. A sample Annual Post-Construction BMP Certification is included in Appendix C.

On or by June 30th of each year, the Town shall receive an Annual Certification of all applicable post-construction BMPs on site. Please note that “post-construction” is triggered when a stormwater facility is installed and functioning as intended.

The annual certifications are required to be completed by a qualified post-construction stormwater inspector. A list of qualified post-construction stormwater inspectors is maintained by the Old Orchard Beach Department of Public Works. To become a qualified post-construction stormwater inspector, an individual must submit evidence of the following criteria to the Department of Public Works for review:

Non-proprietary post-construction BMPs:

- a. Working knowledge of Chapter 500, Stormwater Management Rules and Maine Stormwater BMP Manual,
- b. A post-secondary degree in an environmental science or civil engineering, or comparable expertise,
- c. Demonstrated practical knowledge of stormwater hydrology and stormwater management techniques, including the maintenance requirements for post-construction BMPs, and
- d. The ability to determine if post-construction BMPs are performing as intended.

Proprietary post-construction BMPs:

- a. Proprietary post-construction BMPs must be inspected by a person approved by the manufacturer or equivalent.

APPENDIX A
Reference Documents

TO: Megan McLaughlin, Assistant Planner DATE: February 17, 2016

FROM: Christine Rinehart, Wright-Pierce PROJECT NO.: 11155F

Stephanie Hubbard, Wright-Pierce

SUBJECT: Clarification on Post-Construction Management Plans and Inspections (For Interested Parties)

As it comes time to inspect post-construction sites, consideration was given as to what should be inspected. Although a Post-Construction Stormwater Management Plan should outline both BMPs and stormwater management facilities (collectively referred to as post-construction BMPs) employed on site, only the stormwater management facilities need to be inspected on an annual basis. This is supported by the requirement of the MEPDES MS4 General Permit to have the “owner or operator of a post construction BMP...provide the permittee with an annual report documenting that the BMP is adequately maintained and is functioning as intended or requires maintenance.” Since a practice cannot easily be inspected to determine whether it is adequately maintained and functioning, it is surmised that the intent of the General Permit is to inspect the stormwater management facilities on an annual basis.

It should be communicated with developers, engineers, owner/operators, and inspectors, who may inquire about what is needed to be annually inspected, that stormwater management facilities include any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures. The following is a list of common stormwater management facilities:

- Vegetated areas
- Stormwater channels (i.e. ditches, swales)
- Culverts, riprap outlets/plunge pools
- Catch basin system (i.e. catch basins, drain manholes, and storm drain pipe, particularly those located the furthest downstream and those that discharge into the Town’s MS4 or other stormwater management facilities)
- Roadway or parking surfaces (i.e. roads, access drives, parking lots, not including individual house lot driveways)
- Buffers (i.e. treatment buffers, filter strips, level lip spreaders, ditch turnouts)
- Stormwater detention and retention facilities (i.e. wet and dry ponds, sediment forebays, overflows, outlet structures, subsurface detention systems)
- Runoff infiltration/filter facilities (i.e. rain gardens, bioretention cells, biofilters, infiltration basins/wells/trenches, underdrained soil filters, roof dripline filters, porous pavement)
- Propriety treatment devices (i.e. Filterra, StormTreat, StormTech, Vortech units)

Memo To: Megan McLaughlin
February 17, 2016
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It is important that developers submit a Post-Construction Management Plan and **it is reviewed and approved prior** to the start of construction, since the Post-Construction Stormwater Management Plan should outline all BMPs and stormwater management facilities used onsite, and should include long term operation and maintenance procedures for the stormwater management facilities. The Post-Construction Management Plans will guide the qualified post-construction stormwater inspector as to what to inspect and to ensure their inspection is conducted in accordance with the inspection, cleaning and maintenance requirements outlined in the approved post-construction stormwater management plan. For your reference, attached to this memorandum is a copy of the Post-Construction Management Plan Review Checklist, which outlines what requirements the applicant needs to meet prior to the approval of the Post-Construction Management Plan.

Town of Old Orchard Beach Post-Construction Management Plan Review Checklist

Under Chapter 71 – Post-Construction Stormwater Management Ordinance, all new development and redevelopment within the NPDES MS4 regulated area and meeting the definition of construction activity are required to have an approved Post-Construction Stormwater Management Plan.

Project Name:

- Project is located within the regulated area.
- Project is located in Goosefare Brook Watershed (an Urban Impaired Watershed).

Prior to the approval of the Post-Construction Management Plan, the Applicant needs to meet the following requirements:

71-22(a) Adequate provision for the management of the quantity and quality of all stormwater generated by the new development or redevelopment through a post-construction stormwater management plan.

- Addresses Maine DEP Chapter 500 Standards (Permit by Rule, Basic and General, and as applicable Flooding, Urban Impaired Stream, and other applicable standards) and complies with practices in the Stormwater Management for Maine BMP Manual.

Requires Additional Information:

- Includes an Inspection and Maintenance Plan which contains:
 - o List of site specific post-construction BMPs to be inspected and maintained.
 - o Inspection and maintenance procedures, including frequency, for all proposed post-construction BMPs.
 - o Contact information for the Owner, responsible party for inspection and maintenance, and the consultant/designer.
 - o Form or log to document inspections, maintenance, and any corrective action taken.

Requires Additional Information:

71-22(b) Yes No N/A Applicant submitted documentation that the applicant has sufficient property interest in the property where off-site facilities are located, if off-site facilities are used to meet the quantity and quality standards.

71-22(c) Yes No N/A Applicant submitted documentation that its successors, heirs and assigns shall have the legal obligation and resources available to operate, repair, maintain and replace the post-construction BMPs, if applicant proposes to retain ownership of the post-construction BMPs in the Post-Construction Stormwater Management Plan.

****NOTICE** The applicant shall enter into a maintenance agreement with the municipality prior to the start of construction.**

71-22(d) Yes No TBD Applicant provided perpetual easements to the municipality for elements of the post-construction BMPs that are not within the right-of-way of a public street and will not be offered to the municipality for acceptance as public facilities, if required by the Planning Board.

71-22(e) Yes No N/A Applicant documented compliance with any required stormwater management permit from the Maine DEP by submitting a copy of the Conditions of Approval from the Maine DEP.

**** NOTICE ****

Compliance with the Post-Construction Management Plan includes an annual inspection and certification of the post-construction BMPs by a qualified post-construction stormwater inspector. Compliance is outlined in detail in Section 71-41.

Date Review Completed:

Town of Old Orchard Beach, Maine

Post-Construction Stormwater Management Plan Review

Project:	Name
Review Summary:	_____
Review Completed/Final Submittal Date:	_____
Review Completed by:	_____

General Notes:

- It is recommended that the plans be completed in accordance with the Post-Construction Stormwater Management Plan Guidance Document, as prepared by the Town of Old Orchard Beach and available on their web-page at:
https://www.oobmaine.com/sites/g/files/vyhlf3621/f/pages/guidance_pcswmp_updated.pdf
- Plan specific comments are noted in ***bold/italic*** below. Checked box indicates the information has been provided.

Post-Construction Stormwater Management Plan Review:

The following minimum information should be included in the plan.

Project Contact Information

- Project Name, Location, address and watershed is identified
- Owner/Developer Contact Information is provided (name, address, phone and email)
- Design Engineer Contact Information is provided (name, address, phone and email)
- Responsible Party for Maintenance of Stormwater BMPs has been identified and contact Information is provided (name, address, phone and email)
- Responsible Party for Inspection of Stormwater BMPs has been identified and contact Information is provided (name, address, phone and email)
- Other relevant parties have been identified (Homeowner Assoc/Contractor/etc)

Project Description

- Project Summary. Summary should include existing conditions, site improvements, project use, and operation and utilities.
- Stormwater Management Summary has been prepared or copy of the stormwater Management report is included as an appendix.
 - Pre- and post- development drainage patterns identified
 - Stormwater Conveyance, management and treatment summarized
 - Discharge locations identified
 - Figure prepared identifying the location and ID of stormwater facilities included

Post Construction Stormwater Management Plan Review

- Summary of Application State and Federal Permits required by the Project is prepared.
- Applicant has demonstrated compliance with Maine DEP Chapter 500 Stormwater Management, if applicable

Stormwater Management

- Site-Specific non-structural BMPs and stormwater management facilities to be inspected and maintained have been identified
- Site Specific maintenance procedures for non-structural practices have been detailed.
- Site Specific inspection and maintenance procedures for stormwater management facilities have been detailed.
- Site Specific Form or log to document inspections, maintenance and corrective action Taken is included.
- A summary of how, when and by whom recommended or required maintenance or Repairs should be accomplished.

List of Post-Construction BMPs with Designation on those discharging to the MS4 Table

- Table has been created in format consistent with Town requirements.
- Post-Construction BMP IDs included.
- Type of Post-Construction BMP s noted.
- Discharge Location Noted.
- Discharge to the Towns MS4 has been determined
- Inspection Frequency noted
- Post-Construction Requirements identified
- Post-Construction Responsibility identified

Annual Certification

- The requirements for the Annual Post-Construction BMP Certification are identified
- Annual certification deadline is noted (on or by June 30th of each year)
- Post-construction stormwater inspector qualifications are noted for non-proprietary and proprietary systems.

Recommended Attachments/Appendices:

- Copy of the Signed/Executed Maintenance Agreement is included.
- Copy of the Annual certification requirement is included.

APPENDIX B

Sample Maintenance Agreement

Maintenance Agreement for Post-Construction BMPs

This Maintenance Agreement is made this ____ day of _____ 20____ by and between _____ ("Applicant") and the Town of Old Orchard Beach, Maine ("Town").

The project name is _____.
The location is: _____, Old Orchard Beach, Maine.
The project's Tax Map and Lot Numbers are Tax Map Lot _____.

The project is shown on a plan entitled " _____ " dated _____ and most recently revised on _____, approved by the Planning Board on _____ and recorded in the York County Registry of Deeds in Plan Book _____ Page _____ (the "Project").

WHEREAS, the approval of the Project includes Post-Construction BMP(s) which require periodic maintenance; and

WHEREAS, in consideration of the approval of the Project, the Town of Old Orchard Beach requires that annual inspections and periodic maintenance be performed on the Post-Construction BMPs;

NOW, THEREFORE, in consideration of the mutual benefits accruing from the approval of the Project by the Town and the agreement of Applicant to maintain the Post-Construction BMPs, the parties hereby agree as follows:

1. Applicant, for itself, and its successors and assigns, agrees to the following:

- (a) To inspect, clean, maintain, and repair the Post-Construction BMPs, which includes, to the extent they exist, parking areas, catch basins, detention basins or ponds, drainage swales, pipes and related structures, at least annually, to prevent the build up and storage of sediment and debris in the system;
- (b) To repair any deficiencies in the Post-Construction BMPs noted during the annual inspection;
- (c) To provide an annual certification on the inspection, maintenance, and repair activities performed annually on the Post-Construction BMPs to the Municipal Enforcement Authority;
- (d) To allow access by Town personnel or the Town's designee for inspecting the Post-Construction BMPs for conformance with these requirements.
- (e) To create a homeowners' association, as applicable, for the purpose of maintaining the Post-Construction BMPs.

2. Upon creation of the homeowners' association, as applicable, the homeowners' association

may become responsible for compliance with the terms of this Agreement.

3. The Applicant shall be responsible for this Maintenance Agreement until maintenance responsibility is officially transferred from the Applicant to the homeowner's association or other responsible party. Transfer of responsibility shall be official when an updated Maintenance Agreement is executed and filed with the Town and recorded in the York County Registry of Deeds. Until an updated Maintenance Agreement is recorded, all post-construction maintenance will remain the responsibility of the Applicant.

4. This Agreement shall constitute a covenant running with the land, and Applicant shall reference this Agreement in all deeds to lots and/or units within the Project.

Witness

By: _____
Its:

Witness

TOWN OF OLD ORCHARD BEACH
By: _____
Its:

STATE OF MAINE

_____, ss.

_____, 20__

Personally appeared the above-named _____, the _____ of _____, and acknowledged the foregoing Agreement to be said person's free act and deed in said capacity.

Before me,

Notary Public / Attorney at Law

Print Name: _____

STATE OF MAINE

_____, ss.

_____, 20__

Personally appeared the above-named _____, the _____ of the Town of Old Orchard Beach, and acknowledged the foregoing Agreement to be said his/her free act and deed in said capacity.

Before me,

Notary Public / Attorney at Law

Print Name: _____

APPENDIX C

Sample Annual Certification

Annual Post-Construction BMP Certification

(to be completed by a Qualified Post-Construction Stormwater Inspector and sent to Municipal Enforcement Authority)

I, _____ (print or type name), certify the following:

1. I am making this Annual Post-Construction BMP Certification for the following property: _____ (print or type name of subdivision, condominium or other development) located at _____ (print or type address), (the "Property");

2. The owner, operator, tenant, lessee or homeowners' association of the Property is: _____ (name(s) of owner, operator, tenant, lessee, homeowners' association or other party having control over the Property);

3. I am a Qualified Post-Construction Stormwater Inspector (as defined by Old Orchard Beach, Maine Code of Ordinances, Part II – Code of Ordinances, Chapter 71 – Post-Construction Stormwater Management) hired by the owner, operator, tenant, lessee or homeowner's association of the Property (circle one);

4. I have reviewed the approved Post-Construction Stormwater Management Plan for the Property;

5. On _____, 20__, I inspected the Post-Construction BMPs on the Property, including but not limited to parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures required by the approved Post-Construction Stormwater Management Plan for the Property. The following BMPs were inspected (list Post-Construction BMPs that were inspected):

6. At the time of my inspection of the Post-Construction BMPs on the Property, the following need(s) for routine maintenance or deficiencies in the Post-Construction BMPs were identified (if none, please state):

7. On _____, 20__, the owner, operator, tenant, lessee, or homeowners' association of the Property (circle one) took or had taken the following routine maintenance or corrective action(s) to address the deficiencies in the Post-Construction BMPs stated in 6. above:

8. On _____, 20__, I reinspected the Post-Construction BMPs and determined that they are performing as intended.

9. As of the date of this certification, the Post-Construction BMPs are (check one) functioning as intended by the approved Post-Construction Stormwater Management Plan for the Property or are not functioning as intended by the approved Post-Construction Stormwater Management Plan and require routine maintenance or corrective action(s) to address deficiencies in the Post-Construction BMPs.

I, as the Qualified Post-Construction Stormwater Inspector, understand that I am to furnish a copy of all of my inspection report(s) to the Municipal Enforcement Authority.

Date: _____, 20__.

By: _____

Signature

Print Name

Title/Qualification

Mail or hand deliver this certification to the Municipal Enforcement Authority at the following address:

Code Enforcement Officer
Town of Old Orchard Beach
1 Portland Avenue
Old Orchard Beach, ME 04064