

**MAINTENANCE & OPERATIONS PLAN OF STORMWATER MANAGEMENT FACILITIES  
FOR:  
7 CUMBERLAND AVE., 6-UNIT BUILDING  
PORTLAND, MAINE**

**Responsible Party:** **Banner Properties, LLC**  
126 Underwood Road  
Falmouth, ME 04969

**Plan Prepared by:** **Plymouth Engineering, Inc.**  
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**List of Stormwater Measures:**

Vegetated Areas  
Pervious Pavers  
Pre-Manufactured Green Roof System

**Introduction:**

The owner or operator of the proposed project will be responsible for the maintenance of all stormwater management structures, the establishment of any contract services required to implement the program, and the keeping of records and maintenance log book. At a minimum, the appropriate and relevant activities for each of the stormwater management systems will be performed on the prescribed schedule.

**Inspection & Maintenance Tasks:**

NOTE: The following instructions are excerpts from the Maine Department of Environmental Protection's *Stormwater Management for Maine, Volume III BMPs Technical Design Manual*, dated January 2006.

**Vegetated Areas:**

- 1. Routine Maintenance and Inspection:** The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, reseeding/sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation and to check the condition and integrity of the check dams.
- 2. Aeration:** Vegetated areas may require periodic mechanical aeration to restore infiltration capacity. This aeration must be done during a time when the area can be reseeded and mulched prior to any significant rainfall.
- 3. Erosion:** It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter on the surface.
- 4. Fertilization:** Routine fertilization and/or use of pesticides is strongly discouraged. If complete re-seeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of seed.

**Pervious Pavers:**

- 1. Winter Sand:** Use of winter sand is prohibited on pervious paver surfaces.
- 2. Fertilization:** Use of Fertilization of the area over the pavers shall be prohibited.

3. **Monitoring and Inspections:** Inspecting the pervious paver system each month is recommended. Conduct the inspections after large storms to check for surface ponding at the inlet that may indicate clogging. Water levels in the system should be observed to ensure that the system drains within 72 hours after filling.
4. **Sediment Removal and Maintenance of System Performance:** Accumulated sediment and debris shall be removed monthly from joint spaces. The system must be rehabilitated or replaced if its performance is degraded to the point that applicable stormwater standards are not met.

## Task Frequency:

<b>Table 11-1 Long-Term Inspection &amp; Maintenance Plan</b>				
	Spring	Fall or Yearly	After a Major Storm	Every 2-5 Years
<b>Vegetated Areas</b>				
Inspect all slopes and embankments	X		X	
Replant bare areas or areas with sparse growth	X		X	
Armor areas with rill erosion with an appropriate lining or divert the ero-sive flows to on-site areas able to withstand concentrated flows. See Appendix A(5) of Rule.	X		X	
<b>Stormwater Channels</b>				
Inspect ditches, swales and other open stormwater channels	X	X	X	
Remove any obstructions and accumulated sediments or debris	X	X		
Control vegetated growth and woody vegetation		X		
Repair any erosion of the ditch lining		X		
Mow vegetated ditches		X		
Remove woody vegetation growing through riprap		X		
Repair any slumping side slopes		X		
Replace riprap where underlying filter fabric or underdrain gravel is showing or where stones have dislodge		X		
<b>Culverts</b>				
Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit	X	X	X	
Repair any erosion damage at the culvert's inlet and outlet	X	X	X	
<b>Roadways and Parking Surfaces</b>				
Clear accumulated winter sand in parking lots and along roadways	X			
Sweep pavement to remove sediment	X			
Grade road shoulders and remove excess sand either manually or by a front-end loader	X			
Grade gravel roads and gravel shoulders	X			
Clean-out the sediment within water bars or open-top culverts	X			
Ensure that stormwater is not impeded by accumulations of material or false ditches in the shoulder	X			

**Table 11-1  
Long-Term Inspection & Maintenance Plan**

	Spring	Fall or Yearly	After a Major Storm	Every 2-5 Years
<b>Pervious Pavers</b>				
Inspect and clean-out any pre-treatment measures that collect sediment and hydrocarbons entering an infiltration measure	X	X		
Provide for the removal and disposal of accumulated sediments within the infiltration area				X
Renew the infiltration measure if it fails to drain within 72 hours after a rainfall of one-half inch or more				X
<b>Green Roof System</b>				
Follow manufacturer's suggested maintenance requirements.				

