

Municipal Stormwater Best Management Practices Construction Inspection Checklist

Introduction: This checklist guides municipal field inspectors through the inspection during construction of stormwater [Best Management Practices](#) (BMPs). While municipal construction inspections are not explicitly required by state stormwater regulations, they are important for several reasons. BMPs are designed to manage water quantity, water quality, groundwater recharge, or some combination of the three. In order to ensure that a BMP will meet its design function, as required by municipal stormwater ordinances, the BMPs must be constructed properly. Stormwater runoff can cause flooding and water contamination beyond the boundaries of individual properties. Properly constructed BMPs will minimize potential adverse risks and protect surrounding properties. From a long-term perspective, proper construction will help to ensure the viability of local and regional stormwater planning and strengthen community resilience as environmental risk factors such as increased storm events continue to grow.

This checklist is offered for general information purposes only, and is not an official document of the New Jersey Department of Environmental Protection (NJDEP). It does not, and is not intended to constitute legal advice. Readers, users, or browsers of this checklist should contact their attorney to obtain advice with respect to any particular legal matter. All liability with respect to actions taken or not taken based on the contents of this checklist are hereby expressly disclaimed.

Instructions: Inspectors should refer to Appendix A, “Best Management Practices (BMP) Table,” to identify what components of the subject BMP(s) are applicable. Once relevant components are identified, inspectors can proceed to fill out the checklist. The inspector should complete one inspection checklist per BMP. The inspection items are intended to ensure that the BMP is constructed to the [NJDEP BMP manual](#) standards and that the system(s) will function as intended. BMPs can be inspected multiple times throughout the construction process in order to ensure that below grade components and surface components are installed correctly.

This checklist is not intended to guide post-construction maintenance inspections. Municipalities should refer to the [New Jersey Green Infrastructure Municipal Toolkit Monitoring Log Book](#) for maintenance inspections.

About: This checklist is a product of the New Jersey [Green Infrastructure Municipal Toolkit](#) created for New Jersey Future by Engineering and Land Planning Associates, Inc. (E&LP).

Municipal Installation Inspection Checklist			
Project Name			
Project Location			
Inspection Date			
Inspection Number			
BMP Name			
BMP Type			
BMP Location on Site			
Construction Status			
Inspector Name			
Inspector Phone			
Inspector Email			
Excavation			
Inspection Items	Yes	No	N/A
Elevations are consistent with construction documents			
Areas of proposed infiltration are free of construction equipment and materials			
Subsoil is free of hard clods, stiff clay, hardpan, ashes, slag, construction debris, petroleum, hydrocarbons, and other undesirable materials			
Subsoil is the correct state (not frozen or muddy)			
Appropriate shoring and sheeting is provided for deep excavations			
Tree roots, rocks, and boulders are removed			
The area is free of evidence of sinkholes or subsidence			
The excavated area is free of standing water			
Underdrains			
Inspection Items	Yes	No	N/A
Elevations are consistent with construction documents			
Underdrain diameters are consistent with construction documents			
Perforations are consistent with construction documents			
Underdrains are functional (not defective or damaged)			
Clean stone surround is present			
Clean stone is free of trash, debris, or other foreign materials			
Filter fabric is present			
Engineered Soils/Sands/Infiltration Media			
Inspection Items	Yes	No	N/A
Elevations are consistent with construction documents			
Media depths are consistent with construction documents			
Trash, debris, and other foreign materials are absent			
Media/areas of infiltration are free of construction equipment			
Media is installed in lifts of six to eight inches			
Material provider certification is provided			
The full infiltration areas are free of construction equipment and material storage			

Filter Fabric/Liner			
Inspection Items	Yes	No	N/A
Adjacent strips of filter fabric overlap a minimum of 16 inches			
Fabric is secured four feet outside of bed while under construction			
Irregularities that interfere with drainage are absent			
Where filter fabric or permeable liner is specified, material meets specifications for permeability			
For subsurface gravel wetlands and constructed wetlands, an impermeable liner is used where soil permeability rate is too high			
Where soil or groundwater contamination is present, impermeable liners are used between the system and subsoils.			
For infiltration BMPs, filter fabric is located on the sides of the BMP and not the bottom of the system			
Vegetation			
Inspection Items	Yes	No	N/A
Vegetation is installed per landscape plan (spacing, species, quantity)			
Vegetation meets the requirements of American Standard for Nursery Stock and is selected from certified, reputable nurseries			
Vegetation is installed during appropriate season(s)			
85% of the vegetation cover proposed in the construction drawings is installed and alive at the time of inspection			
Invasive plants are absent			
Structural Component (outlet control, tank, concrete, etc.)			
Inspection Items	Yes	No	N/A
Cracking subsidence, spalling, erosion, and deterioration is absent			
Invert elevations are consistent with construction documents			
Structure(s) is installed per manufacturer's specifications			
Orifice, weir, and grate elevations and sizing are consistent with construction documents			
Trash racks have parallel bars with one-inch spacing between bars up to the elevation of the Water Quality Design Storm; material is rigid, durable, and corrosion resistant			
Pretreatment (cartridges, inlet filters, etc.)			
Inspection Items	Yes	No	N/A
Pretreatment features are installed per design professional and/or manufacturer's specifications			
Maintenance Control (Cleanouts, access ports, access ramps, etc.)			
Inspection Items	Yes	No	N/A
Maintenance controls are installed in correct location			
Ladder access is provided for vaults greater than four feet			
Maintenance controls are installed per design professional or manufacturer specifications			
The BMP is accessible, without blockages from excessive vegetation			

Corrective Actions Required
Notes

If the inspector has marked “Yes” for all applicable inspection items, no further action is needed at the current point in construction. If the inspector has checked “No” to any applicable inspection items, the municipality should recommend corrective action to the contractor. More detailed descriptions of correct construction practices can be found in the [NJDEP BMP Manual](#).

Appendix A – Best Management Practices (BMP) Table

Introduction: This table lists stormwater management BMPs and breaks down different components that should be inspected. For example, it shows that dry wells *always* include excavation, filter fabric/liner, structure components, and maintenance control and *sometimes* include pretreatment. It is important to cross reference the BMP being inspected with the construction drawings and specifications to identify any specific design components or requirements. The table is meant to be used with the Municipal Stormwater BMP Construction Inspection Checklist, which shows all of the items to check for each component. This is meant to help municipalities ensure proper BMP installation and function, but it has not been reviewed by the New Jersey Department of Environmental Protection.

Instructions: First, identify the BMP on the left. Next, read across the row to see which components are included in that BMP. Note that “X” indicates that the component is *always* included in that BMP design and that “O” indicates that the component is *sometimes* included in that BMP design. Finally, head to the Municipal Stormwater BMP Construction Inspection Checklist to see the items that must be inspected for each component.

	Excavation	Underdrains	Engineered Soils/Sands/ Infiltration Media	Filter Fabric/Liner	Vegetation	Structural Component (outlet control, tank, concrete, etc.)	Pretreatment (cartridges, inlet filters, etc.)	Maintenance Control (Cleanouts, access ports, access ramps, etc.)
Cistern						X	X	X
Dry Well	X			X		X	O	X
Grass Swale	X	X	X		X	O	O	
Green Roof		X	X	X	X	X		
Manufactured Treatment Device	X		O	O	O	X	X	X
Pervious Pavement System	X	O	X	X		X		X
Bioretention System	X	O	X	X	X	X	O	X
Infiltration System	X	O	X	X		X	O	X
Sand Filter	X	O	X	X	O	X	O	X
Vegetative Filter Strip	O		O		X			
Standard Constructed Wetlands	X	O	X	O	X	X	O	X
Wet Pond	X		X	X	O	X	O	X
Blue Roof						X		
Extended Detention Basin	X				O	X	O	X
Subsurface Gravel Wetland	X		X	X	X	X	X	X

X = Always Included in Construction

O = Sometimes Included in Construction