

# Stormwater Management Measures Maintenance Plan & Field Manuals

Development Name: \_\_\_\_\_

(For linear development, use road name, mile marker, region, or other appropriate title to denote the scopes of this Maintenance Plan)

Address: \_\_\_\_\_

Block(s) / Lot(s): \_\_\_\_\_

Township, County: \_\_\_\_\_

## Party Responsible for Maintenance:

\_\_\_\_\_

Address: \_\_\_\_\_

Contact Person(s): \_\_\_\_\_ Phone: \_\_\_\_\_

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_

This plan is recorded in

Deed Book # \_\_\_\_\_ Page # \_\_\_\_\_ with \_\_\_\_\_ County Clerk on Date

\_\_\_\_\_

Last Revised on MM / DD / YYYY

## NOTE

**This Maintenance Plan is intended to be editable and adjustable in accordance with the design of stormwater management measures, the site conditions, and the special needs of responsible party. The Engineer should supplement information and best management practice to assist the responsible party to perform maintenance.**

Blue text indicates information may be deleted and or replaced as necessary.

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## Part II- Field Manuals and Maintenance Records

Field Manual for ([BMP name and No.](#))  
Field Manual for ([BMP name and No.](#))  
Field Manual for ([BMP name and No.](#))  
Field Manual for ([BMP name and No.](#))  
Field Manual for ([BMP name and No.](#))  
Field Manual for ([BMP name and No.](#))

Maintenance Logs and Inspection Records

# **Part I- Maintenance Plan**

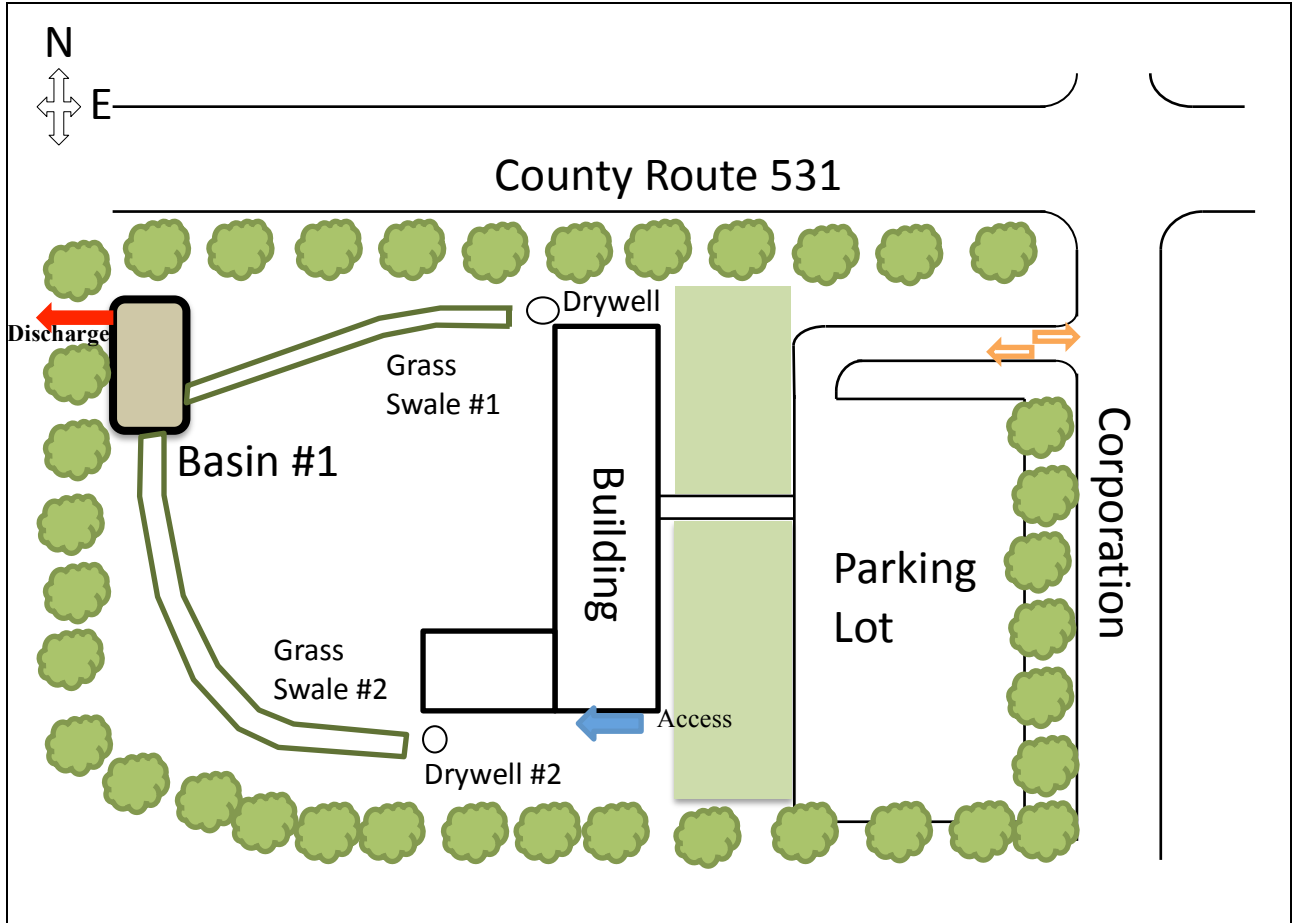
## List of Stormwater Management Measures

The stormwater management measures incorporated into this development are listed below. The corresponding Field Manuals for the stormwater management measures are located in Part II of the Maintenance Plan.

<b>Type of Stormwater Management Measure</b>	<b>BMP No.</b>	<b>Location Description</b>	<b>State Plane Coordinates / Lat., Long.</b>
Infiltration Basin	Basin #1	e.g., Northwest corner of the development, near County RT 531	(X, Y; N, E)
Drywell	DW #1	e.g., The northeast side, in the back of the main building	(X, Y; N, E)
Drywell	DW #2	e.g., The southeast side, in the back of the main building)	(X, Y; N, E)
Grass Swale	GS #1	e.g., Following DW #1 along the north side of the backyard to the Infiltration Basin (Basin #1)	(X, Y; N, E)
Grass Swale	GS #2	e.g., Following DW #2 along the south side of the backyard to the infiltration basin (Basin #1)	(X, Y; N, E)
Discharge Point	Discharge # 1	e.g., Located in the northeast corner behind the infiltration basin, discharging to Beaver Brook	(X, Y; N, E)
Access Route to the Stormwater Management Measures	-	e.g., From south corner of the building along the tree line	-

## Location Map

Place a description of the location map here. Replace the image below with an overall site plan or simple layout sketch indicating the relevant locations of stormwater management measures. An example map is shown below.



No.	Type of Stormwater Management Measure
Basin #1	Infiltration Basin
DW #1	Drywell
DW #2	Drywell
GS #1	Grass Swale
GS #2	Grass Swale
Discharge # 1	Discharge Point

## Description of Stormwater Management Measures

### Name of the stormwater management measure (e.g., Infiltration Basin)

Design storm:

- Design Purposes:
  - o (Water quality, water quantity, and/or recharge)
  - o 1.25 inches in 2 hours
  - o 2-year storm (\_\_\_\_ inches);
  - o 10-year storm (\_\_\_\_ inches);
  - o 100-year storm (\_\_\_\_ inches)
- Dimensions: \_\_\_\_\_ (Length) x \_\_\_\_\_ (Width) x \_\_\_\_\_ (Depth)

### Name of the stormwater management measure (e.g., Grass Swale #1)

Design storm:

- Design Purposes:
  - o (Water quality)
  - o 1.25 inches in 2 hours
- Dimensions: \_\_\_\_\_ (Length) x \_\_\_\_\_ (Width) x \_\_\_\_\_ (Depth);
- Slope \_\_\_\_\_

### Name of the stormwater management measure (e.g., Drywell #1)

Design storm:

- Design Purposes:
  - o (Water quantity and/or recharge)
  - o 1.25 inches in 2 hours
- Dimensions: \_\_\_\_\_ (Length) x \_\_\_\_\_ (Width) x \_\_\_\_\_ (Depth)

Continue adding sections for additional storm water management measures as necessary

**More detailed information regarding each specific measure should be listed in the attached Field Manual.**

## Preventative and Corrective Maintenance Action Plan

As per N.J.A.C. 7:8-5.8(b) & (e), preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including, but not limited to, repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of non-vegetated linings.

As per NJDEP BMP Manual Ch. 8 (Feb. 2004), maintenance plans should include specific preventative and corrective maintenance tasks such as removal of sediment, trash, and debris; mowing, pruning, and restoration of vegetation; restoration of eroded areas; elimination of mosquito breeding habitats; control of aquatic vegetation; and repair or replacement of damaged or deteriorated components.

As per NJDEP BMP Manual Ch. 8 (Feb. 2004), maintenance plans should include recommended corrective responses to various emergency conditions that may be encountered at the stormwater management measure. It should be noted that if the stormwater management measure includes a Class I or II dam as defined in the NJDEP Dam Safety Standards at N.J.A.C. 7:20, an emergency action plan for the dam is also required. See N.J.A.C. 7:20-1.7(f) for more information.

As per NJDEP BMP Manual Ch. 8 (Feb. 2004), the maintenance plan should address the maintenance of access points to the stormwater management measures in accordance with the following:

- all components of the stormwater management measures must be readily accessible for inspection and maintenance;
- trees, shrubs, and underbrush must be pruned or trimmed as necessary to maintain access to the stormwater management measure via roadways, paths, and ramps, including paths through perimeter vegetation to permanent pools, aquatic benches, and safety ledges to allow for the inspection and control of mosquito breeding; and
- the exact limits of inspection and maintenance easements and rights-of-way should be specified on stormwater management measure plans and included in the maintenance plan.



**List preventative maintenance actions and the corrective maintenance actions in the tables provided below.**

**Preventative Maintenance Actions**

The frequency of the preventative maintenance actions listed here is adopted from Chapter 9, BMP Manual of Structural Stormwater Management Measures. Design engineer and responsible party should adjust the frequency of preventative maintenance actions according to the situations of the stormwater management measures in the development.

<b>Frequency</b>	<b>Preventative Maintenance Actions</b> (list specific preventative maintenance actions and the required frequency)	<b>Stormwater Measures/ No.</b> (list specific stormwater management measures pertinent to the Frequency)
Monthly	Vegetation mowing and removal in growing season Other monthly preventative maintenance actions	e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1), access
Quarterly	Quarterly inspection (Sediment removal, depending on the type of measure) Other quarterly preventative maintenance actions	e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)
Semiannual	Sediment removal, depending on the type of measure Other semiannual preventative maintenance actions)	e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)
Annual	Basin Structural Inspection Other annual preventative maintenance actions	e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)
Biennial	Sand layer replacement for sand filter and infiltration basin only Others biennial preventative maintenance actions	e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)
Unscheduled	Quick inspection after every 1" rain	e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)
(Other)	e.g., specific maintenance schedule for a manufactured treatment device as required by the manufacturer	

### Corrective Maintenance Actions

Depending on many factors, such as the performance of preventative maintenance actions, weather, or unexpected incidents, corrective maintenance requirements may not be precisely anticipated; however, a list of potential corrective maintenance actions may assist the responsible party in planning and estimating costs in advance.

<p align="center"><b>Potential Corrective Maintenance Actions</b></p>	<p align="center"><b>Stormwater Management Measures/No.</b> (list specific stormwater management measures on this site)</p>
<p><b>Example of corrective maintenance tasks</b></p> <ul style="list-style-type: none"> <li>- Repair/replacement of eroded or damaged riprap apron</li> <li>- Repair/replacement of missing or damaged trash racks</li> <li>- Repair/replacement of outlet pipes or orifices</li> <li>- Revegetation of eroded side slope, aquatic bench, marsh, basin bottom, grass swales, etc.</li> </ul>	<p>e.g., Grass Swale (GS #1, GS#2), Infiltration Basin (Basin #1)</p>
<p><b>Example of the corrective maintenance tasks</b></p> <ul style="list-style-type: none"> <li>- Repair/ Replacement of eroded or damages riprap apron</li> <li>- Repair/ Replacement of missing or damaged trash racks</li> <li>- Repair/ Replacement of outlet pipes or orifices</li> <li>- Revegetation of eroded side, aquatic bench, marsh, side slope, basin bottom, grass swales, etc.</li> </ul>	<p>e.g., Grass Swale( GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)</p>
<p><b>Example of the corrective maintenance tasks</b></p> <ul style="list-style-type: none"> <li>- Repair/Replacement of eroded or damages riprap apron</li> <li>- Repair/Replacement of missing or damaged trash racks</li> <li>- Repair/Replacement of outlet pipes or orifices</li> <li>- Revegetation of eroded side, aquatic bench, marsh, side slope, basin bottom, grass swales, etc.</li> </ul>	<p>e.g., Grass Swale( GS #1, GS#2), Infiltration Basin (Basin #1), Drywell (DW#1, DW#2)</p>
<p>Other</p>	

The corrective maintenance actions should be also listed in the Field Manuals for the specific stormwater management measures on the site.

## Inspection and Logs of All Preventative and Corrective Maintenance

As per N.J.A.C. 7:8-5.8(f), the person responsible for maintenance shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.

As per NJDEP BMP Manual Ch. 8 (Feb, 2004), a maintenance plan shall include a schedule of regular inspections and tasks, and detailed logs of all preventative and corrective maintenance performed on the stormwater management measure, including all maintenance-related work orders. The person with maintenance responsibility must retain and, upon request, make available the maintenance plan and associated logs and other records for review by a public entity with administrative, health, environmental, or safety authority over the site.

Inspection Checklists in the Field Manual for the stormwater management measures on this site include:

- List the name of the Field Manual
- List the name of the Field Manual
- List the name of the Field Manual

The logs of all inspections, and both preventative and corrective maintenance performed should be attached in the “**Maintenance Logs and Inspection Records**” section. See Part II of the Maintenance Plan

## Maintenance Personnel, Equipment, Tools, and Supplies

As per NJDEP BMP Manual Ch. 8 (Feb. 2004), maintenance plans should include equipment, tools, and supplies necessary to perform the various preventative and corrective maintenance tasks specified in the plan. Sources of specialized, proprietary, and nonstandard equipment, tools, and supplies should also be provided.

This section applies to both maintenance tasks that are performed by in-house personnel or are outsourced. The design engineer has to list the required amount of maintenance personnel, equipment, tools, and supplies necessary to perform the various preventative and corrective maintenance tasks specified in the plan. In addition, the sources of specialized, proprietary, and nonstandard equipment, tools and supplies for specific measures, such as manufactured treatment devices should also be listed.

### Maintenance Personnel/Equipment/Tools/Supplies

Personnel/Equipment/Tools Name	Quantity
(e.g., general maintenance crew)	
(e.g., debris removal tools)	
(e.g., lightweight backhoe)	

### Specialized, proprietary or nonstandard equipment, tools and supplies, if applicable

Name of the specialized, proprietary or nonstandard equipment, tools and supplies	Source
(e.g., filter cartridge for MTD )	(MTD manufacturer's name)

Warranty and parts information should be attached to the Documents section.

## Disposal Plan

As per NJDEP BMP Manual Ch. 8 (Feb. 2004), the maintenance plan should include approved disposal and recycling sites and procedures for sediment, trash, debris and other material removed from stormwater management measures during maintenance operations.

### Disposal/Recycling Procedures

- Dewatering procedures and requirements  
(Details)
- Unloading procedures and requirements  
(Details)
- Covering procedures and requirements  
(Details)

### Disposal Field – Onsite (if applicable)

#### Location of the Onsite Disposal Field:

Provide a description of the site and any nearby wetland, floodplain, or water body

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#### Permits for the Proposed Onsite Disposal Field

Local/State permits  not required  
 required

Permit Number	Government Entity	Issuance Date	Expiration Date
(If available)	(If available)	(If available)	(If available)

A copy of all permits should be included in the Documents section of the Maintenance Plan.

### Disposal Field – Offsite (if applicable)

#### Description of the Offsite Disposal:

By the township, by a private operator and conveyance entity, etc.

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A copy of the contract should be included in the Documents section of the Maintenance Plan if available.

## Cost Estimate

As per N.J.A.C.7:8-5.8(b), cost estimates of maintenance tasks, including, but not limited to, sediment, trash and debris removal must be included in the maintenance plan. Below is an illustration of a cost breakdown and estimation for maintenance of stormwater management measures. The design engineer should estimate the cost based on the expected maintenance required for each stormwater management measure. The actual costs may vary with factors such as local requirements, equipment, personnel, weather, and maintenance methods.

### COST ESTIMATES

#### Cost Overview

The design engineer should list the maintenance tasks and break down the costs for each maintenance task.

Cost Type	Cost	Details
Cost of sediment , trash, and debris removal		
General cost for routine maintenance (e.g., quarterly maintenance)		Table A
General cost – unscheduled maintenance		Table B
Cost associated with special tasks for specific stormwater measures (e.g., biennial sand replacement for sand filter)		Table C
Cost associated with regulatory requirements (e.g., local permit(s), state permit(s), federal permit(s), license(s), liability insurance, equipment operation license(s), certificate(s), etc.)		Table D
Total cost		

**Table A:** General cost for routine maintenance (e.g., quarterly maintenance)

<b>Cost Type</b>	<b>Required Quantity</b>	<b>Unit Price</b>	<b>Cost</b>
<b>Personnel</b>			
Crew	(e.g., persons per day)		
Supervisor			
<b>Equipment</b>			
Truck	(e.g., required hours of operation of the equipment)		
Mower			
<b>Supplies</b>			
Seed	(e.g., bags required)		
Topsoil	(e.g., cubic yards required)		
Working garments/ gloves/protective measures			
<b>Services</b>			
Subcontractor for disposal			
<b>Subtotal</b>			
<b>Overhead</b>			
<b>Total Cost</b>			

**Table B:** General cost – unscheduled maintenance in a year (e.g., inspection after 1 inch of rain)

<b>Cost Type</b>	<b>Required Quantity</b>	<b>Unit Price</b>	<b>Cost</b>
<b>Personnel</b>			
Crew			
<b>Subtotal</b>			
<b>Overhead</b>			
<b>Total Cost</b>			

**Cost Estimate of Unscheduled Inspections**

- The design engineer can calculate this by reviewing rainfall data in recent years and noting that there are, on average, X rainfall events annually that exceed 1 inch. Therefore, the estimated cost = X events of 1” rain per year x \$ cost of each inspection.

**Table C:** Cost associated with special tasks for specific stormwater measures (e.g., biennial sand replacement)

<b>Cost Type</b>	<b>Required Quantity</b>	<b>Unit Price</b>	<b>Cost</b>
<b>Personnel</b>			
Crew			
Supervisor			
<b>Equipment</b>			
Truck			
Lightweight backhoe rental			
<b>Supplies</b>			
Sand			
Working garments/gloves/ protective measures			
<b>Services</b>			
Subcontractor for disposal			
<b>Subtotal</b>			
<b>Overhead</b>			
<b>Total Cost</b>			



**Table D:** Cost associated with regulatory requirements (e.g., local permit(s), state permit(s), federal permit(s), license(s), liability insurance, equipment operation license(s), certificate(s), etc.

Cost Type	Period		Fee for each application/renewal	Additional cost for permit preparation
	Effective Date	Expiration Date		
Local permit(s) (specify the permit title)				
State permit(s) (specify the permit title)				
Federal permit(s) (specify the permit title)				
Liability insurance				
Equipment operation license(s)				
Certificate(s)				
Other				
<b>Subtotal</b>				
<b>Overhead</b>				
<b>Total Cost</b>				

The requirement to obtain State permits depends on specific circumstances, such as, but not limited to, the specific design of the stormwater management measures, the maintenance actions, the access and disturbance, the disposal methods, the location of disposal, the method to empty a basin, the method to dredge the basin, the pollutants in the basin, the damages to the basin, and the method to repair the basin.

Check Maintenance Guidance in NJDEP Stormwater Management Website for details and links to the relevant permits and program areas ( <http://www.njstormwater.org>).

## Safety Measures and Procedures

As per NJDEP BMP Manual Ch. 8 (Feb. 2004), maintenance plans should include procedures and equipment required to protect the safety of inspection and maintenance personnel.

### Safety Regulations and Requirements

Attach all local ordinance(s) and state and federal regulations regarding occupational safety after this section

### Safety Tools, Equipment and Garments

List required safety tools and equipment, their location, the responsible person and the contact number. List first aid tools to be carried to field.

Safety Tools and Equipment	Location	Responsible Person/Contact #

### Qualification for Performing the Task in Special Circumstances

List of the measures requiring Occupational Safety and Health Administration (OSHA) Confined-Space Entry Permit (e.g., MTDs or underground tanks)

Stormwater Measures	Location	(OSHA) Confined-Space Entry Permit

### Safety Training

List required safety training in the Training Plan and Records section of this Maintenance Plan.

### Safety Procedures

List all precautions required before entering the BMPs, such as wearing safety ropes, checking whether hazardous gases are present, or checking whether poisonous plants are present. List all standard safety procedures for operating equipment (e.g., signs around operation zones or slope stability when operating a backhoe). List other information required by the applicable local, state, and federal laws and regulations, and the safety instructions provided by the equipment or device manufacturers.

### Emergency Procedures

List all first aid and emergency contacts and contact numbers.

**Attach local ordinance(s) and state and federal regulations regarding occupational safety, if applicable.**

## Training Plan and Records

As per NJDEP BMP Manual Ch. 8 (February 2004), maintenance training begins with a basic description of the purpose and function of the overall stormwater management measure and its major components. Such understanding will enable maintenance personnel to provide more effective component maintenance and more readily detect maintenance-related problems. Depending on the size, character, location, and components of each stormwater management measure, maintenance personnel may also require training in specialized inspection and maintenance tasks and/or the operation and care of specialized maintenance equipment. Training should also be provided in the need for and use of all required safety equipment and procedures.

### I. Training Plan

#### Types of Training

- Mandatory Stormwater Management Basic Training and Field Manual Usage Training for new maintenance crews
- Occupational Safety Training
- Subcontractor training, if applicable

#### Content of Training

- **Stormwater Management Basic Training**
  - Purposes and Functions of BMPs

#### Example Training Material

- NJDEP Stormwater BMP Manual, Chapter Nine: Structural Stormwater Management Measures
  - Chapter 9.1 Bioretention Systems
  - Chapter 9.2 Constructed Wetlands
  - Chapter 9.3 Dry Wells
  - Chapter 9.4 Extended Detention Basins
  - Chapter 9.5 Infiltration Basins
  - Chapter 9.6 Manufactured Treatment Devices
  - Chapter 9.7 Pervious Paving Systems
  - Chapter 9.8 Rooftop Vegetated Cover
  - Chapter 9.9 Sand Filters
  - Chapter 9.10 Vegetative Filter Strips
  - Chapter 9.11 Wet Ponds
  - Chapter 9.12 Grass Swales
  - Chapter 9.13 Subsurface Gravel Wetlands

More training information is available at NJ Stormwater.org  
(<http://www.nj.gov/dep/stormwater/training.htm>)

- Vegetation Care

- Example Training Material

- NJDEP Stormwater BMP Manual, Chapter Seven: Landscaping (*provides information on vegetation and landscaping for stormwater management measures*)
    - Other

- Field Manual Usage Training

- Example Training Material

- Field Manuals attached to this Maintenance Plan
    - Other

- Equipment and Tools Operation Training

- Example Training Material

- Equipment or tool manufacturer's Operation & Maintenance Manual
    - Other

- Occupational Safety Training

- Example Training Material

- OSHA Training
    - Equipment or tool manufacturer's Operation & Maintenance Manual
    - Other

## **II. Training Records**

Training attendance sheets should be attached by the responsible party after each training.

**Attach training attendance sheets from each training**

## Annual Evaluation of the Effectiveness of the Plan

As per N.J.A.C. 7:8-5.8(g), the person responsible for maintenance shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.

The responsible party should evaluate the effectiveness of the maintenance plan by comparing the maintenance plan with the actual performance of the maintenance. The items to evaluate may include, but not limited to,

- Whether the inspections have been performed as scheduled;
- Whether the preventive maintenance has been performed as scheduled;
- Whether the frequency of preventative maintenance needs to increase or decrease;
- Whether the planned resources were enough to perform the maintenance;
- Whether the repairs were completed on time;
- Whether the actual cost was consistent with the estimated cost;
- Whether the inspection, maintenance, and repair records have been kept.

If actual performance of those items has been deviated from the maintenance plan, the responsible party should find the causes and implement solutions in a revised maintenance plan.

### Annual Evaluation Records

Evaluator(s)	Date of Evaluation	Decision
		<input type="checkbox"/> Maintain current version OR  <input type="checkbox"/> Revise current version Revision date _____ (also update the last revision date on the cover page)  <input type="checkbox"/> Requires a new deed recording (also update the last recording information on the cover page)
		<input type="checkbox"/> Maintain current version OR  <input type="checkbox"/> Revise current version Revision date _____ (also update the last revision date on the cover page)  <input type="checkbox"/> Requires a new deed recording (also update the last recording information on the cover page)
		<input type="checkbox"/> Maintain current version OR  <input type="checkbox"/> Revise current version Revision date _____ (also update the last revision date on the cover page)  <input type="checkbox"/> Requires a new deed recording (also update the last recording information on the cover page)

## Documents

**Please attach the following:**

### **Transfer Agreement**

As per N.J.A.C. 7:8-5.8(b), if the maintenance plan identifies a person other than the developer as having the responsibility for maintenance, the plan shall include documentation of such person's agreement to assume this responsibility, or the developer's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.

### **Deed**

As per N.J.A.C. 7:8-5.8(d), if the person responsible for maintenance is not a public agency, the maintenance plan and any future revisions shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.

### **As-Built Drawings with Drainage Plans**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), as-built construction plans of the stormwater management measure and copies of pertinent construction documents, such as laboratory test results, permits, and completion certificates should be included in this Maintenance Plan.

### **Landscaping Plan for the Stormwater Management Measures**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), if there is a Landscaping Plan for the stormwater management measures, it should be included in this Maintenance Plan.

### **Permeability Test/Infiltration Test Report**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), if a permeability test or infiltration test is required and available, the reports for pre-construction and post-construction testing should be included in this Maintenance Plan.

### **Groundwater Mounding Analysis**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), if a groundwater mounding analysis is required and the groundwater mounding analysis was performed, a copy of the analysis should be included in this Maintenance Plan.

### **Soil Boring Logs**

As per NJDEP BMP Manual Ch.8 (Feb., 2004), if any soil borings were taken prior to construction, a copy of the soil boring logs should be included in this Maintenance Plan.

### **Local, State, Federal Permits**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), local, state, or federal permits related to the stormwater management measures for this development should be included in this Maintenance Plan. See Cost Estimate Section of This Maintenance Plan for more information.



The requirement to obtain State permits depends on specific circumstances, such as, but not limited to, the specific design of the stormwater management measures, the maintenance actions, the access and disturbance, the disposal methods, the location of disposal, the method to empty a basin, the method to dredge the basin, the pollutants in the basin, the damages to the basin, and the method to repair the basin.

Check Maintenance Guidance in NJDEP Stormwater Management Website for details and links to the relevant permits and program areas ( <http://www.njstormwater.org>).

### **Safety Regulations and Requirements**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), all local ordinances and state and federal regulations regarding occupational safety should be included in this Maintenance Plan.

### **Devices/Tools/Equipment Operation and Maintenance Manual and Warranties**

As per NJDEP BMP Manual Ch. 8 (Feb., 2004), maintenance, repair, and replacement instructions for specialized, proprietary, and nonstandard equipment, tools, supplies, manufacturers' product instructions, and user manuals should be included in this Maintenance Plan.

**Attach Documents Here**

## **Part II- Field Manuals**

## **Attachment of Field Manuals for Stormwater Management Measures on this Site**

As per N.J.A.C. 7:8-5.8(b)&(e), preventative and corrective maintenance shall be performed to maintain the function of stormwater management measures, including repair or replacement of the structure; removal of sediment, debris or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; repair or replacement of non-vegetated linings, and removal of rodent/wildlife and repair/restoration to damaged affected areas caused by them.

Each Field Manual attached to this Maintenance Plan is a separate document pertaining to one specific stormwater management measure, and should be used by inspections and maintenance crews in order to carry out the maintenance work required by N.J.A.C. 7:8-5.8(e). Design engineers should prepare the field manuals in accordance with the design of each measure and the specific requirements of the site. See the sample field manuals for further guidance.

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## **Maintenance Logs and Inspection Records**

As per N.J.A.C. 7:8-5.8(e), preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure(s), including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of non-vegetated linings.

As per N.J.A.C. 7:8-5.8(f), the person responsible for maintenance shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.

The responsible party shall maintain a record of all maintenance actions performed, including:

- Inspection checklists from each performed inspection
- Preventative maintenance logs
- Corrective maintenance logs, including work orders
- Other maintenance records