Stormwater Management Facility Maintenance Manual

For

Medical Office Building

Proposed Site Plan

Block 106, Lot 6

City of Northfield Atlantic County, New Jersey

Prepared By:



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December 2021

Marc A. DeBlasio, PE

Professional Engineer New Jersey License No. 41599 This page intentionally left blank

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Section 1.0 – Introduction

This maintenance manual is prepared in accordance with NJAC 7:8-5.8 Maintenance Requirements for Stormwater Management Facilities. The purpose of this manual is to provide maintenance procedures, techniques, inspection requirements and timeframes for the proposed development known as <u>Webster Property Management</u> located in Township of Northfield, Atlantic County, New Jersey.

This manual is prepared on behalf of the applicant to provide the necessary guidelines for the maintenance and repair of the proposed Stormwater Management Facilities (SWMF) that will be created as part of the overall development plan. The proposed SWMFs will be located on Lot 8, Block 106 as shown on the plans entitled "Major Site Plan" as prepared by DeBlasio & Associates, dated December 2021.

Once this plan is approved, it will be recorded in the Atlantic County Clerk's Office as required.

<u>Section 2.0 – Project Description</u>

This development plan proposes the creation of a medical office in City of Northfield. The site contains an existing cleared lot used for overflow parking from the adjacent property. The development plan has been developed in accordance with the standards of the Development Ordinances of the City of Northfield, as well as the New Jersey Department of Environmental Protection. The proposed development plan includes the construction of asphalt parking and drive aisles, a proposed 5,116 SF two story building, and other associated site and drainage improvements. The new SWMFs include one (1) new basin.

Section 3.0 – Proposed Stormwater Management Facilities

The development plan for this project proposes the construction of one (1) stormwater basin surrounding the project site as well as 5 'A Inlets' with perforated pipe in stone beds. Runoff from portions of the site travels overland to the proposed inlets and basin.

The proposed basin will be constructed with a typical 3H:1V side slope. The side slopes and bottom will be grassed.

Section 4.0 – Project Authorization

This manual was prepared by DeBlasio & Associates for the Proposed 5,116 SF building to provide a mechanism by which remedial repairs and routine maintenance items can be performed to avoid long term degradation of the stormwater management facilities.

Immediately upon completion of the proposed improvements, the individual responsible for the basin maintenance shall be designated.

The responsible party will contract directly with outside contractors for the maintenance and repair of the SWMFs. This includes the routine maintenance of the onsite landscaped areas around the perimeter of each basin. Periodic maintenance of the SWMFs is to be performed by a qualified contractor.

Should ownership or maintenance responsibilities of the SWMFs change, permanent arrangements shall be made that the operation and maintenance of all facilities shall pass to any successive owner, unless such responsibilities are assumed by a governmental agency. The applicant shall enter into an agreement with (Declaration of Covenants and Restriction for Drainage Structures) with the City of Northfield to ensure the continued operation and maintenance of the SWMF, unless the municipality agrees to accept the SWMF as a municipally owned facility. The Agreement shall require that the Responsible Party to provide a twenty-year (20) maintenance guarantee and a maintenance and inspection program for the entire stormwater management system. The Responsible Party shall also guarantee an inspection, maintenance and repair/replacement program for a period no less than ten (10) years.

The method of guarantee shall either be in the form of cash deposited with the municipality, without interest or shall be in the form of a Performance or Maintenance Bond or Letter of Credit of Escrow Agreement. The form of the guarantee shall be acceptable to the Municipal Solicitor and must be approved by the Municipal Governing Body.

The Responsible Party shall evaluate the effectiveness of the Inspection, Maintenance and Repair Plan at least once per year, and shall update the plan as necessary. A copy of any updated plan shall be provided to the municipality, after it is duly recorded in the Atlantic County Clerk's Office.

<u>Section 5.0 – Project Contractors</u>

The SWMF shall be constructed by an experienced and qualified contractor, experienced in this type of construction, in accordance with the plans prepared by DeBlasio & Associates, "Major Site Plan" as prepared by DeBlasio & Associates, dated December 2021.

Section 6.0 – Miscellaneous Correspondence

The Responsible Party, as identified in Section 4.0, shall keep a detailed log of all preventative and corrective maintenance performed on the site's SWMF, including a record of all inspections and copies of all maintenance work orders in the Maintenance, Inspection & Repair Plan. Said records and inspection reports shall be kept for a minimum of five (5) years. The Responsible Party shall retain and make available upon request of any public entity with administrative, health, environmental or safety authority over the site, the maintenance plan and the required documentation including copies of all inspection reports and maintenance logs for the SWMF. All inspection, maintenance, and repair plans and reports shall be updated and submitted annually to the Municipal Engineer for review.

In addition, the Responsible Party shall make the site available for inspection by a representative of the municipality every two (2) years.

<u>Section 7.0 – General Maintenance Information</u>

The Stormwater Management Maintenance Manual has been prepared to provide direction in the maintenance of the SWMF located in the proposed development. A well-executed maintenance plan will protect the SWMF against degradation and will extend the life of the facility as well. The Manual establishes a basic maintenance program based primarily on the systematic inspections of the facilities by a representative of the Responsible Party.

A regular inspection means the visual inspection of the facilities at regularly scheduled periods to check for any signs of deterioration in the materials or functionality of the system. The designated inspector shall perform the informal (maintenance) inspections of the SWMF. An informal inspection consists of a visual inspection of the onsite facilities to detect any deterioration of the system.

During an informal inspection, several items, like those identified in Section 9.0, shall be used as a guideline for the inspection of the SWMF. The Inspection Checklist for Stormwater Management Facilities, located in Attachment A, shall be used to identify those items that were inspected. The completed Checklist shall be signed and dated by the inspector and filed appropriately by the Responsible Party.

The manual is intended as a guide to outline the proper procedure for conducting routine maintenance of the SWMF. A copy of this manual shall be provided to the appointed individual or company who will perform the onsite inspection. Should the individual/company performing the routine inspections change, a copy of the manual shall be provided to the new individual/company to maintain consistency of the inspection reports. A continuous record of the operations and maintenance of the facilities must be maintained. The designated inspectors list, located in Section 8.0, lists the various parties responsible for the inspections. This section shall be updated periodically pending changes to the list of inspectors. Any updates shall be submitted yearly to the Municipal Engineer for reference.

The enclosed sections of the manual have been prepared to provide the inspector with a simple and systematic procedure for the inspection, operation and maintenance of the onsite SWMF. The maintenance of the facilities primarily involves observation rather than evaluation. The following sections provide a step-by-step procedure to assist the inspector in performing all duties in a rational and orderly manner. The inspector must become familiar with the background information provided in Sections 1.0 through 3.0 of this manual prior to completing any inspection of the facility.

Each time an inspection reveals the need for maintenance, the inspector shall notify the Responsible Party, who may hire a contractor to perform the required work. This work shall be performed under the direction of licensed Professional Engineer as needed. When maintenance is performed on the SWMF, the inspector shall record the incident and place

a copy of the maintenance work order and checklist on file with the Responsible Party (see Attachment C). Inspections shall be performed, at a minimum of once a year, and after every storm event of more than one (1) inch of rainfall. Routine maintenance, as defined in Section 10.0, shall be performed after each inspection and each major storm event as required.

This manual addresses the need to properly plan for the maintenance of the SWMF by addressing the maintenance issues for the varying components of the proposed infiltration basin and stormwater conveyance system as they relate to the preventative, corrective and aesthetic maintenance requirements of the system. The costs associated with the maintenance of the system are addressed in Attachment E.

Presented below are detailed descriptions of maintenance procedures that are applicable to the proposed SWMF. The primary emphasis of this maintenance program is preventative actions, rather than corrective actions. The goal of this maintenance program is to provide sufficient preventative actions to minimize, or completely eliminate any necessary corrective actions.

Aesthetic maintenance will play a key role in the SWMF maintenance program. As shown below, aesthetic maintenance procedures can easily be incorporated into a preventative maintenance schedule. When performed regularly, aesthetic maintenance will help reduce the amount of both preventative and corrective maintenance. It will maintain the visual appeal of the SWMF and will allow it to reflect positively on the maintenance staff, responsible party and the community as a whole.

Section 8.0 – Designated Inspectors List

This section must be updated annually and submitted to the Municipal Engineer for reference. The Responsible Party shall update the list periodically to reflect the name(s) and telephone number(s) of the inspectors and contractors who are appointed to perform the inspection and maintenance of the SWMF. The individual responsible for the basin maintenance shall be designated at the time of the project completion.

Inspector Contact Information				
	Company	Contact	Mailing	Telephone /
		Name	Address	Fax / Email
1				
2				
3				

	T			1
Combination	Tafawaatiaa			
Contractor	<u>Information</u>		N.4. *!!	T '
	Company	Contact	Mailing	Telephone /
		Name	Address	Fax / Email
1				
2				
3				
Professiona	al Engineer Contact Informa	ntion		
	Company	Contact	Mailing	Telephone /
		Name	Address	Fax / Email
1				
2				
3				
3				

<u>Section 9.0 – Inspection & Inspection Checklist</u>

The proposed SWMF shall be inspected on a regular basis during informal maintenance procedures and after a rainfall event of 1-inch or more. Additional regularly scheduled inspections shall also occur by qualified personnel. Each inspection shall include, but is not limited to, the following:

Informal Inspection:

- a. Inspect top of bank and vegetated side slopes of basins for erosion.
- b. Inspect conduit outlet protection (rip-rap) for trash and/or debris.
- c. Inspect basins for standing water within 72 hours of a rainfall event.

- d. Inspect basin spillways for trash, debris and erosion.
- e. Inspect flared end sections and headwalls for structural damage, graffiti and erosion along edges.
- f. Inspect landscaping for dead or dying plant material.
- g. Inspect basin access points for trash and debris, erosion and settlement.
- h. Inspect stormwater inlets for erosion and debris.
- i. Inspect pipes for trash and debris, settlement and erosion.
- j. Inspected grassed shoulders in the aera of collection inlets for trash, debris, settlement and erosion.

Regularly Scheduled Inspection:

- a. All informal inspection items listed above.
- b. Inspect flared end section and discharge pipe for clogging, debris and garbage.
- c. Inspect basins and basin bottoms for clogging, debris and garbage.
- d. Inspect conduit outlet protection for clogging, debris and garbage.
- e. Inspect wooded areas surrounding the basins for debris and garbage.
- f. Inspect basin side slopes for animal burrows.
- g. Inspect inlets for clogging, debris and garbage.

The inspection checklist and log included in Attachments A and B should be filled out after each inspection. Generally, informal inspections shall be performed every two to four weeks between March and December. After each inspection, maintenance operations shall be directed as needed.

Section 10.0 – Functional Maintenance

Functional Maintenance is the maintenance required to keep a SWMF functional or operational at all times. Functional Maintenance includes Preventative (Routine) Maintenance, Corrective (Emergency) Maintenance and Aesthetic Maintenance procedures as outlined below.

Section 10.1 – Preventative Maintenance

Preventative Maintenance is required to maintain the intended operation and safe condition of the SWMF by preventing the occurrence of problems and malfunctions. Preventative maintenance will be performed in accordance with the direction presented in this Manual. Preventative maintenance includes items and inspections of the SWMFs and their surroundings. Typical routine maintenance procedures include grass cutting, fertilizing, silt, soil and debris removal and upkeep of the structural components of the facility. Preventative maintenance includes, but is not limited to the following:

a. Grassed Areas:

- Mow and trim the perimeter and side slopes of the SWMFs so that grass grows no more than one to two inches between cuttings.
- Fertilize, thatch, and condition the soil around the SWMFs perimeter and side slopes to maintain healthy growth.
- Re-seed areas damaged by sediment accumulation, stormwater flow, erosion or other causes to re-establish grass cover.
- Inspect stabilization of grassed areas to prevent erosion of sediments and conveyance of sediments into the SWMFs.

b. Landscaping:

- Prune and fertilize trees, shrubs and ground covers around the perimeter of the SWMFs.
- Implement pest control measures in the vicinity of the SWMFs.

c. Trash & Debris:

- Remove and dispose of trash and debris which collects around the perimeter of the SWMFs.
- Remove and dispose of trash and debris which collects within the SWMFs.
- Dispose of trash and debris in accordance with all local, county, state and federal regulations.

d. Sediment:

- Inspect and remove accumulated sediment from the conduit outlet protection as necessary.
- Inspect and remove accumulated sediment from the bottom sand layer of the SWMF as necessary.
- Inspect SWMFs for infiltration of stormwater within 72 hours of the end of a rainfall event to determine if basins are functioning as designed.
- Remove sediment from the SWMFs if the sediment accumulates to a point where it affects the volume, infiltration rate, or flow of stormwater

within the system. Sediment shall be removed when it has reached a level three (3) inches above the original bottom of the basin.

- Use appropriate methods and equipment to remove sediment in order to avoid damaging the basin bottom, side slopes, and embankments.
- Dispose of sediment in accordance with all local, county, state and federal regulations.

e. Mosquitoes:

- Inspect immediate surroundings of the SWMFs for areas of water ponding.
- Remove trash and debris, such as open cans and bottles, and sediment accumulation to eliminate mosquito breeding habits.
- Re-grade any areas of ground settlement to eliminate any potential breeding habitats.
- Establish a maintenance schedule to check and eliminate potential mosquito breeding areas.
- Contact the local Mosquito Control Commission to obtain information on the maintenance required to prevent and eliminate mosquito breeding habitats.
- Regular monitoring of the mosquito population will indicate the need to have the SWMF areas sprayed with a pesticide. Application of pesticides shall be completed only by trained professionals.

<u>Section 10.2 – Corrective Maintenance</u>

Corrective maintenance includes the maintenance procedures that are required to correct a problem or malfunction at a SWMF and to restore the facility's operation back to its original design/construction state. Based on the severity of the problem, corrective maintenance may be performed on an emergency or non-routine basis, and includes such procedures as structural repairs, mosquito control and restoration of vegetated slopes. Corrective maintenance includes, but is not limited to:

a. Trash & Debris:

 Remove trash and debris within the SWMFs to prevent the volume, recharge capacity, and conveyance abilities of the SWMF from being affected.

b. Structural Damage:

- If cracking, subsidence, spalling, erosion and/or deterioration to flared end sections, storm pipe grates, riprap, conduit outlet protection, or basin spillways is identified, they shall be repaired immediately.
- The extent of the damage to these systems will indicate the immediacy of any necessary repairs to ensure the continued function of the entire system.

c. Vegetated Areas:

- Any damage to the embankments of the SWMFs shall be immediately repaired.
- Damage can occur from rain or flood events, vandalisms, animals, vehicles or neglect and include problems such as settlement, scour, seepage or rutting.
- The immediacy of the repairs will depend on the extent and nature of the damage and its effects on the safety and operation of the SWMFs.
- The vegetative cover shall be maintained at a minimum of 85%. If the vegetation exhibits greater than 50% damage, the area shall be reestablished in accordance with the original design plans and specifications.
- Where a re-seeding preventative maintenance program has not been effective in maintaining a non-erosive vegetative cover, other measures shall be initiated to prevent further loss of soil.
- Alternative methods and materials to control erosion include riprap, gabion lining, sod, seeding, concrete lining and re-grading may be necessary if continued corrective maintenance is required.
- The analysis of damage and the design and performance of repairs should be undertaken by a qualified professional.

d. Infiltration Basin Bottoms:

• If the infiltration capacity of the system results in standing water remaining in the basin beyond the 72-hour time period, corrective maintenance shall be performed.

- All infiltration basin components where debris and sediment are trapped shall be inspected for clogging and excessive debris and sediment accumulation.
- Any standing water in the SWMF shall be removed prior to performing corrective maintenance procedures. Portable pumps may be necessary to drain the basin until the system can be repaired.
- Sediment removal shall be performed when the basin is completely drained.
- Accumulated sediment shall be removed, and the basin bottom shall be disced or aerated to a minimum depth of 6-inches to restore the infiltration capacity of the SWMF.
- The permeability rate of the soil below the basin shall be tested periodically if the basin continues to fail to drain within the required 72hour period.
- Debris, trash, sediment and other waste material shall be disposed of at an approved disposal/recycling site in compliance with local, state and federal regulations.

e. Mosquitoes:

- Evidence of excessive siltation and/or mosquito breeding shall necessitate the implementation of corrective measures to eliminate such problems.
- Qualified personnel such as the local Mosquito Control Commission shall be contacted to coordinate the extermination of mosquitoes immediately.
- Proper procedures carried out by trained personnel can control the mosquitoes with a minimum of damage or disturbance to the environment.
- If mosquito control requires continuous corrective maintenance procedures, the maintenance program shall be re-evaluated to place more emphasis on the control of mosquito breeding habitats through preventative methods.

f. Snow & Ice:

 Areas of snow and ice accumulation that result in the SWMFs not functioning as required shall be removed from critical areas to assure the continued function of the facility during winter months.

Section 10.3 – Aesthetic Maintenance

Aesthetic Maintenance is the actions required to enhance or maintain the visual appeal of the SWMF. The SWMF have been designed to be an integral component of the overall development. The facilities have an inherent aesthetic quality that enriches the development as a whole. Aesthetic Maintenance can also reduce the amount of preventative and corrective maintenance required. Aesthetic maintenance procedures include, but are not limited to the following:

a. Landscaped Areas:

- Trimming grass edges around the perimeter of the SWMF provides a neat and attractive appearance of the facility.
- Periodic weeding, either chemically or mechanically in addition to a regular grass maintenance program, will maintain a healthy turf as well as keeping the grass areas looking attractive.
- Removal of trash and debris around the perimeter and within the SWMF will help to keep the facility functional and attractive.
- Attention to performance items such as the pruning, leaf collection, debris removal and grass cutting will keep the stormwater management facilities functional and attractive.

b. Graffiti:

- Graffiti shall be removed in a timely fashion. Removal can be accomplished by painting or otherwise covering it, or removing it with scrapers, solvents or cleansers.
- Timely removal is important to discourage further graffiti and other acts of vandalism.

Checklists for the Preventative and Corrective Maintenance for the SWMF are located within Attachments C and D. These checklists should be filled out at the completion of any necessary maintenance activities. The checklists and logs are generic in nature and should only include those items which are necessary for the maintenance of the SWMFs.

Section 11.0 – Maintenance Schedule

All maintenance shall be completed in accordance with the following schedule. The inspection logs and checklists should be completed and signed by the inspector. These reports shall include a summary of the performance, condition of the entire stormwater system and recommendations for the repairs and/or replacement of facilities. If any deficiencies are observed in the stormwater management facility, the inspector shall notify the responsible party that corrective actions should be implemented as soon as possible. The inspection reports shall be kept on file by the responsible party and shall be available for review by governing agencies as required. In addition, inspection, maintenance, and repair reports shall be submitted to the municipal engineer annually for review. The individual responsible for the basin maintenance shall be designated at the time of the project completion.

Storm

Repair of identified items shall be completed as soon as possible after the item is identified during inspections and maintenance efforts are completed. Items under preventative maintenance shall be performed during routine maintenance of the site to ensure that the on-site systems are free of sediments, debris and garbage so that they will continue to function as intended.

The stormwater management system shall have informal (preventative maintenance) inspections performed during regularly scheduled landscaping maintenance periods and after significant storm events of one (1) inch or more of rain. These inspections shall occur between the months of March and December. A regular inspection for the stormwater facilities shall be performed in accordance with the Maintenance Schedule provided. The enclosed forms in Attachments A & B shall be used to assist in the inspection procedure. All maintenance repairs must be completed as outlined in this manual and records of it shall be kept as part of the annual inspection and maintenance report requirements.

Section 12.0 - Maintenance Tools & Equipment

The following is a list of general inspection equipment required for routine maintenance procedures and inspections:

- 1. A clipboard, a pencil, and the Inspection Checklist, included in Attachment B.
- 2. A standard six (6) foot collapsible ruler.
- 3. A camera photographs of observed portions of the facilities will provide a measure of performance when comparing post and present maintenance practices or conditions.
- 4. A flashlight to observe the inside of pipes and other structures.

The following is a list of tools and machinery that are typically required to maintain SWMFs:

- 1. Grass Maintenance Equipment:
 - a. Tractor mounted mowers
 - b. Riding mowers
 - c. Hand mowers
 - d. Gas powered trimmers
 - e. Gas powered edgers
 - f. Seed spreaders
 - g. Fertilizer spreaders
 - h. De-thatching equipment
 - i. Pesticide and herbicide application equipment
 - j. Grass clipping and leaf collection equipment
- 2. Vegetative cover maintenance equipment
 - a. Saws
 - b. Pruning shears
 - c. Hedge trimmers
 - d. Wood clippers
- 3. Transportation Equipment:
 - a. Trucks for transportation of materials
 - b. Trucks for transportation of equipment
 - c. Vehicles for transportation of personnel
- 4. Debris, Trash & Sediment Removal Equipment
 - a. Loader
 - b. Backhoe
 - c. Grader
 - d. Vacuum truck
 - e. Water jetting units
- 5. Miscellaneous equipment
 - a. Shovels
 - b. Rakes
 - c. Picks
 - d. Wheelbarrows
 - e. Fence repair tools
 - f. Painting equipment
 - g. Gloves
 - h. Standard mechanics tools
 - i. Tools for maintenance of equipment
 - j. Office space
 - k. Office equipment
 - I. Telephones
 - m. Safety equipment

- 6. Materials:
 - a. Topsoil
 - b. File
 - c. Seed
 - d. Soil amenities (fertilizer, lime, etc.)
 - e. Chemicals (pesticides, herbicides)
 - f. Mulch
 - q. Paint
 - h. Paint removers
 - i. Spare parts for equipment
 - j. Concrete

Section 13.0 – Maintenance Costs

In order to properly implement a stormwater management facilities maintenance plan, the costs associated with the maintenance procedures must be budgeted into the overall design of the system. Annual routine maintenance costs are estimated between \$1,000 and \$1,500. Non-routine maintenance and repairs will be done as needed.

Section 14.0 – References

The following documents provide additional information regarding stormwater maintenance facilities management:

- 1. <u>Residential Site Improvement Standards</u>, New Jersey Department of Community Affairs (NJAC 5:21-7), revised through June 7, 2010.
- 2. <u>New Jersey Stormwater Best Management Practices</u>, New Jersey Department of Environmental Protection, April 2004.
- 3. <u>Stormwater Management Rules (NJAC 7:8)</u>, New Jersey Department of Environmental Protection, February 2, 2004.
- 4. <u>Stormwater Management Facilities Maintenance Manual</u>, NJDEP & Killam Associates, June 1989.
- 5. City of Northfield Land Development Ordinance

Attachment A

Inspection Log & Checklist for Stormwater Management Facilities

Inspection Log & Checklist for Stormwater Management Facilities

INSPECTION LOG

Name of Facility:	Date:
Facility Location:	Weather:
Prepared By:	Page:

Year	Date	Inspector	Comments

Inspection Log & Checklist for Stormwater Management Facilities

INSPECTION CHECKLIST - PAGE 1 of 2

Name of Facility:	Date:
Facility Location:	Weather:
Prepared By:	Page:

	Item	OK ¹	Routine ²	Urgent ³	Comments
1.	Embankment & Sid	e Slopes	, ,		
Α	Vegetation				
В	Erosion				
С	Settlement				
D	Sloghing				
Е	Trash & Debris				
F	Seepage				
G	Aesthetics				
Н					
I					
2.	Bottoms (Infiltration	n)	_		_
Α	Vegetation				
В	Erosion				
С	Standing Water				
D	Settlement				
Е	Trash & Debris				
F	Sediment				
G	Aesthetics				
Н					
I					
3.	Ponds (Retention)				
Α	Vegetation				
В	Shoreline Erosion				
С	Trash & Debris				
D	Sediment				
Е	Riprap				
F	Aesthetics				
G					
Н					
4.	Flared End Structur	es	1		
Α	Condition				
В	Erosion				
С	Trash & Debris				
D	Sediment				
Ε	Aesthetics		<u> </u>		

Inspection Log & Checklist for

Stormwater Management Facilities

INSPECTION CHECKLIST - PAGE 2 OF 2

Name of Facility:	Date:
Facility Location:	Weather:
Prepared By:	Page:

	Item	OK ¹	Routine ²	Urgent ³	Comments
5.	Spillway	1	1		
Α	Vegetation				
В	Lining				
С	Erosion				
D	Trash & Debris				
Е					
F					
6.	Facility Perimeter				
Α	Vegetation				
В	Erosion				
С	Trash & Debris				
D	Aesthetics				
Е					
F					
		l .	l .		
7.	Access Road				
Α	Vegetation				
В	Road Surface				
С	Erosion				
D	Aesthetics				
Е					
F					
8.	Miscellaneous				
0.	Effectiveness of				
	Existing				
Α	Maintenance				
	Program				
	Potential				
В	Mosquito Habitat				
С	Mosquitoes				
D	inosquitoes				
E					

- The item check is in good condition and the maintenance program is adequate.
 The item check requires attention, but does not present an immediate threat to the facility function or other facility components.
- The item checked requires immediate attention to keep the facility operational or to prevent damage to other facility components.
- Provide explanation and details if column 2 or 3 is checked.

Inspection Log & Checklist for Stormwater Management Facilities

Name of Facility: Facility Location: Prepared By:	Date: Weather: Page:			
Remarks (Refer to Item No. if Applicable)				
_				
_				
_				

Attachment B Maintenance Log & Checklist for Stormwater Management Facilities

Maintenance Log & Checklist for Stormwater Management Facilities

MAINTENANCE LOG

Name of Facility:	Date:
Facility Location:	Weather:
Prepared By:	Page:

Year	Date	Inspector	Comments

Maintenance Log & Checklist for Stormwater Management Facilities

MAINTENANCE CHECKLIST - PAGE 1 of 2

Name of Facility:	Date:
Facility Location:	Weather:
Crew:	Work Started:
Equipment:	Work Ended:
Total Manhours of Work:	
Work Order Prepared By:	

A. Preventative Maintenance

Work Completed By:

	Item	Required	Done	Comments
1.	Grass Cutting	,		
Α	Embankment &			
_	Side Slopes			
В	Perimeter Areas			
С	Access Areas &			
D	Roads			
E				
2.	Grass Maintenance			
Α	Fertilizer			
В	Re-Seeding			
С	De-thatching			
D	Pest Control			
Ε				
F				
3.	Vegetative Cover	T		
Α	Fertilizing			
В	Pruning			
С	Pest Control			
D				
Е				
4.	Trash & Debris Remo	val		
Α.	Bottoms	vai		
В	Embankments &			
	Side Slopes			
С	Perimeter Area			
D	Access Area &			
	Roads			
Е	Conduit Outlet			
	Protection			

Inspection Log & Checklist for

Stormwater Management Facilities

MAINTENANCE CHECKLIST - PAGE 2 OF 2

Name of Facility:	Date:
Facility Location:	Weather:
Crew:	Work Started:
Equipment:	Work Ended:
Total Manhours of Work:	
Maula Oudan Duananad Dua	

Work Order Prepared By: Work Completed By:

	Item	Required	Done	Comments	
5.	Sediment Removal				
Α	Conduit Outlet				
	Protection				
В	Basin Bottoms				
С					
D					
6.	Elimination of Poter	ntial Mosqui	to Breeding	Habitats	
Α	Areas of Ponding				
	Water				
В					
С					
7.	7. Other Preventative Maintenance				
Α					
В					
С					

B. Corrective Maintenance

	Item	Required	Done	Comments
Α	Removal of Debris & Sediment			
В	Structural Repairs			
С	Dam, Embankment & Slope Repairs			
D	Dewatering			
Е	Pond/Swale Maintenance			
F	Control of Mosquitoes			
G	Erosion Repair			
Н	Elimination of Trees, Brush, Roots & Animal Burrows			
I	Snow & Ice Removal			

J		
K		

C. Aesthetic Maintenance

	Item	Required	Done	Comments
Α	Graffiti Removal			
В	Grass Trimming			
С				
D				
Е				

Maintenance Log & Checklist for Stormwater Management Facilities

Name of Facility: Facility Location: Prepared By:	Date: Weather: Page:					
Remarks (Refer to Item No. if Applicable)						