



- points of access for heavy equipment (if necessary) to reach stormwater quality control measures for maintenance and cleanout (e.g., underground sediment capture devices)
- proper direction of stormwater flow in channels, underground pipes and detention spaces
- outfall/s where stormwater exits the site

#### 4. Stormwater Control Measures Details

Details (e.g. detail sheets) are attached with this plan for the storm water control measures (SCMs) that are on the property – to show outfall boxes, weirs, orifices; underground storage chambers and associated access ports; layers of stone and soil media in infiltration trenches, swales, and bioretention areas; layers of stone and paving material in pervious concrete or paver blocks; etc.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Bioretention          | <input type="checkbox"/> Inlet filter                             | <input type="checkbox"/> Sand filter                     |
| <input type="checkbox"/> Cistern               | <input type="checkbox"/> Paver blocks                             | <input type="checkbox"/> Swale (weirs and/or underdrain) |
| <input type="checkbox"/> Filter strip          | <input type="checkbox"/> Pervious concrete                        | <input type="checkbox"/> Wetland                         |
| <input type="checkbox"/> Infiltration trench   | <input type="checkbox"/> Rain garden                              | <input type="checkbox"/> Manufactured device             |
| <input type="checkbox"/> Detention pond/s      | Outfall box, orifice, weir, key elevations                        |  |
| <input type="checkbox"/> Underground detention | Inlet points, layout, outfall box, weir, elevations; access ports |  |
| <input type="checkbox"/> Other:                |   |  |
- 
- Other:
- 

#### 5. Maintenance Checklists

We have attached checklist/s for each type of stormwater control measures on this site. The checklists will be used by the operator of the facility as a guide to inspecting the SCMs. Note that the checklists show a recommended inspection frequency.

Qty.	Type of Stormwater control measure	Size/length/# (total)	Units	Frequency of Inspection
	Bioretention		square feet	
	Channel, grass		linear feet	
	Cistern		gallons	
	Filter strip		square feet	
	Green roof		square feet	
	Infiltration trench		square feet	

	Inlet filter		no. of units	
	Paver blocks		square feet	
	Pervious concrete		square feet	
	Rain garden		square feet	
	Sand filter		square feet	
	Swale (crosstie weirs and/or underdrain)		linear feet	
	Wetland		square feet	
	Manufactured treatment device*		no. of units	
	Pond, dry		cubic feet	
	Pond, extended detention		cubic feet	
	Pond, wet		cubic feet	
	Detention, underground		cubic feet	

\* We have included the manufacturer’s recommended inspection and service protocols as a part of this maintenance plan.

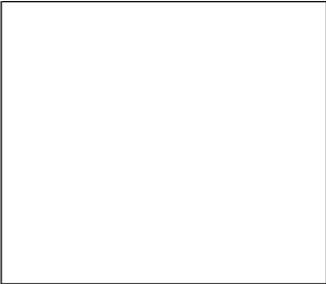
\*Stormwater Control Measures should be checked after rain events that may cause blockages and clogging.

**Preparer’s signature**

This plan has been prepared by me or under my direction and review, and to the best of my knowledge the information provided is correct and true.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date





Inspector Name	Facility Name
Inspector Affiliation	Facility Location
Inspector Phone	MWSD File No.



### Operation & Maintenance Inspection Underground Detention

Inspection Item	Observed						Comments
	+	-	x	A/M/S	Y/N	Maintenance Required	
<b>Inlets &amp; Outlets</b>							
Inlets /outlets obstructed with trash, debris, vegetation							
Evidence of excess sediment entering inlets							
Evidence of excess sediment leaving treatment unit							
Erosion at inlets/outlets							
Damage to inlet/outlet structures							
Inlet filter (if applicable) obstructed and/or in poor condition							
<b>Treatment Unit</b>							
Maintenance access obstructed							
Depressions in pavement surface, other indicators of settling							
Disconnected/leaking pipes, other evidence of joint failure							
Sediment in vault requiring removal							
Trash/floating debris in vault requiring removal							
Permanent pool depth too high/low							
<b>Adjacent Areas</b>							
Construction activity in CDA**							
Eroded/destabilized surfaces in CDA							
Deterioration of adjacent paved surfaces							
<b>Other</b>							
Unauthorized modifications to drainage system/treatment unit							
Additional Notes:							
Inspector Signature	Date			Time			

\*Inspection Frequency: A/M/S = Annually, Monthly, following a major Storm, \*\*CDA = Contributing Drainage Area

Inspector Name	Facility Name	
Inspector Affiliation	Facility Location	
Inspector Phone	MWSD File No.	

**SCM Operation & Maintenance Inspection  
Checklist  
Bioretention**

Type    On-line    Offline  
No. Cells

Inspection Item	Frequency*					Y/N	Comments
	Observed	Did not observe	Did not inspect	Frequency*	Action Required		
	+	-	x				
<b>Bioretention Surface</b>							
Evidence of clogging/standing water							
Scouring/erosion of vegetated surfaces							
Trash/debris/other contaminants							
Sediment deposits							
Depressions in bioretention basin							
Surface fails to drain completely between rain events							
<b>Drainage &amp; Pre-treatment System Components</b>							
Drainage system fails to completely dewater between rain events							
Altered drainage pattern, flow diversion, short circuiting, etc.							
Broken cleanouts, missing/stuck caps, other structural damage							
Cleanout, underdrain clogged with sediment/debris							
Erosion at system inflow (headwalls, curb cuts, downspouts, etc.)							
Structural damage to pre-treatment forebay or gravel diaphragm							
Excessive sediment (> 3") in forebay/gravel diaphragm							
<b>Vegetation</b>							
Shallow/bare spots in mulch layer (< 3")							
Less than 80% vegetative cover (plants and much combined)							
Weeds, invasive and/or undesirable plants present							
Plants are unhealthy or overgrown							
<b>Other</b>							
Construction activity in CDA**							
Eroded/destabilized surfaces in CDA							
Other sources of sediment in CDA							

Additional Notes:

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Inspector Signature	Date	Time
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\*Inspection Frequency: A/M/Q/S/ST = Annually, Monthly, Quarterly, Semi-annually, following a major Storm  
 \*\*CDA = Contributing Drainage Area

Inspector Name	Facility Name
Inspector Affiliation	Facility Location
Inspector Phone	MWSD File No.



Operation & Maintenance Inspection Proprietary Treatment Device	Observed						Comments
	+	-	x	A/M/S	Y/N		
<b>Inlets &amp; Outlets</b>							
Inlets /outlets obstructed with trash, debris, vegetation							
Evidence of excess sediment entering inlets							
Evidence of excess sediment leaving treatment unit							
Erosion at inlets/outlets							
Damage to inlet/outlet structures							
Inlet filter (if applicable) obstructed and/or in poor condition							
<b>Treatment Unit</b>							
Maintenance access obstructed							
Depressions in pavement surface, other indicators of settling							
Disconnected/leaking pipes, other evidence of joint failure							
Sediment in vault requiring removal							
Trash/floating debris in vault requiring removal							
Permanent pool depth too high/low							
<b>Adjacent Areas</b>							
Construction activity in CDA**							
Eroded/destabilized surfaces in CDA							
Deterioration of adjacent paved surfaces							
<b>Other</b>							
Unauthorized modifications to drainage system/treatment unit							
Additional Notes:							
Inspector Signature	Date	Time					

\*Inspection Frequency: A/M/S = Anually, Monthly, following a major Storm, \*\*CDA = Contributing Drainage Area



Inspector Name	Facility Name
Inspector Affiliation	Facility Location
Inspector Phone	MWSD File No.



PAVEMENT TYPE: Permeable Pavers  
 Porous Concrete  
 Porous Asphalt  
 Other (specify) \_\_\_\_\_

## Operation & Maintenance Inspection Checklist Permeable Pavement

Inspection Item	Frequency*					Comments
	Observed	Did not observe	Did not inspect	Frequency*	Maintenance Required	
	+	-	x	A/M/S	Y/N	
<b>Pavement Surface</b>						
Evidence of clogging/standing water						
Sediment deposits						
Trash/debris						
Cracks/indicators of deterioration						
Depressions, potholes						
Surface fails to dewater between rain events						
Evidence of staining, oil, other contaminants						
<b>Drainage Structures</b>						
Broken cleanouts/other structural damage						
System fails to completely dewater between rain events						
Cleanout, underdrain clogged with sediment/debris						
<b>Adjacent Areas</b>						
Construction activity in CDA**						
Eroded/destabilized surfaces in CDA						
Deterioration of adjacent paved surfaces						
<b>Other</b>						
Unauthorized modifications (replacement with traditional pavement, expanded parking area)						
Additional Notes:						

Inspector Signature	Date	Time
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\*Inspection Frequency: A/M/S = Annually, Monthly, following a major Storm, \*\*CDA = Contributing Drainage Area

Inspector Name	Facility Name
Inspector Affiliation	Facility Location
Inspector Phone	MWSD File No.



## Operation & Maintenance Inspection Enhanced Swale

Inspection Item	<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Observed</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Did not observe</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Did not inspect</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Frequency*</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Maintenance Required</div> </div>					Comments
	+	-	x	A/M/S	Y/N	
<b>Swale Surface &amp; Vegetation</b>						
Evidence of clogging (standing water, soggy soil)						
Scouring/erosion of vegetated surfaces						
Poorly established grass/bare soil						
Grass height less than 3" or greater than 6"						
Plants are unhealthy or overgrown						
Weeds, invasive and/or undesirable plants present						
Unauthorized plantings						
Trash/debris/other contaminants						
Sediment deposits (>20% design depth requires removal)						
Depressions in swale surface						
Surface fails to drain completely between rain events						
<b>Drainage System Components</b>						
Drainage system fails to completely dewater between rain events						
Altered drainage pattern, flow diversion, short circuiting, etc.						
Broken cleanouts, missing/stuck caps, other structural damage						
Cleanouts/underdrain clogged with sediment or debris						
Erosion at system inflow (incoming headwalls, curb cuts, downspouts, etc.)						
<b>Check Dams, Flow Spreaders, &amp; Energy Dissipaters</b>						
Erosion at downstream toe of drop structures						
Structural damage, unauthorized modifications						
<b>Pre-treatment System Components</b>						
Structural damage to pre-treatment forebay or gravel diaphragm						
Excessive sediment (> 3") in forebay/gravel diaphragm						
<b>Vegetation</b>						
Grass height less than 3" or greater than 6"						
Unauthorized plantings						
Weeds, invasive and/or undesirable plants present						
Plants are unhealthy or overgrown						
<b>Other</b>						
Construction activity in CDA**						
Eroded/destabilized surfaces in CDA						
Other sources of sediment, such as deteriorating pavement, in CDA						
Additional Notes:						
Inspector Signature				Date		Time

\*Inspection Frequency: A/M/S = Annually, Monthly, following a major storm

\*\*CDA = Contributing Drainage Area



Inspector Name	Facility Name
Inspector Affiliation	Facility Location
Inspector Phone	MWSD File No.



**Operation & Maintenance  
Inspection  
Sand Filter**

Inspection Item	<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Observed</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Did not observe</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Did not inspect</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Frequency *</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Maintenance Required</div> </div>					Comments
	+	-	x	A/M/S	Y/N	
<b>Pretreatment Structures &amp; Inlets</b>						
Inlet to forebay/sediment chamber obstructed with trash or debris						
Structural damage to forebay/sediment chamber components						
Erosion at inlets requiring stabilization and/or erosion protection						
Sediment accumulation in forebay greater than 6"						
<b>Drainage System Components</b>						
Drainage system fails to completely dewater between rain events						
Altered drainage pattern, flow diversion, short circuiting, etc.						
Broken cleanouts, missing/stuck caps, other structural damage						
Cleanouts/underdrain clogged with sediment or debris						
<b>Sand Chamber &amp; Sand Bed</b>						
Standing water, failure to drain completely between rain events						
Weeds, invasive and/or undesirable plants present						
Trash, debris, and/or other contaminants						
Sand bed eroded, uneven, or displaced						
Sand bed clogged or compacted						
Inlets/outlets obstructed with trash or debris						
Erosion of inlets/outlets requiring stabilization						
Structural damage to chamber components (vault, pipes, etc)						
<b>Other</b>						
Construction activity in CDA**						
Eroded/destabilized surfaces in CDA						
Unauthorized modifications						
Maintenance access obstructed						

Additional Notes:

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Inspector Signature	Date	Time
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\*Inspection Frequency: A/M/S = Annually, Monthly, following a major Storm  
 \*\*CDA = Contributing Drainage Area

Inspector Name	Facility Name
Inspector Affiliation	Facility Location
Inspector Phone	MWSD File No.



### Operation & Maintenance Inspection Water Quality Protection Area

Inspection Item	Observed			Frequency*		Comments
	+	-	x	A/M/S	Y/N	
<b>General</b>						
Unauthorized development (clearing, grading, building, paving, etc) in WQPA						
WQPA sparsely vegetated, or vegetation is in poor health						
WQPA overgrown with invasive vegetation						
Evidence of herbicide/fertilizer use in or in the vicinity of the WQPA						
Trash/debris in WQPA, including lawn clippings and yard waste						
Unauthorized structures and/or impervious surfaces in WQPA						
WQPA does not span the full length of the stream						
<b>Zone 1</b>						
Zone width = 35 feet from top of bank						
Zone populated with mature, undisturbed vegetation, including trees and other woody plant species						
Zone is free of invasive species, contains only native vegetation						
Signs posted and/or boundary marked at 100 ft intervals along the outer edge of Zone 1						
<b>Zone 2</b>						
Zone width = 15 feet from top of bank						
Zone populated with undisturbed vegetation, including mature grasses and other native plant species						
Zone is free of invasive species, contains only native vegetation						
All new plantings consist of native vegetation only						

Additional Notes:

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Inspector Signature	Date	Time
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\*Inspection Frequency: A/M/S = Annually, Monthly, following a major Storm \*\*CDA = Contributing Drainage Area

## MAINTENANCE AGREEMENT FOR STORMWATER FACILITIES AND SYSTEMS

Being the property conveyed to \_\_\_\_\_ in Deed Book \_\_\_\_\_, Page \_\_\_\_\_ Register's Office of \_\_\_\_\_ County, Tennessee.

\_\_\_\_\_, (individual or collectively, the "Owner"), the Owner of the real property described in Exhibit \_\_\_\_\_ attached hereto and incorporated herein by reference (the "Property"), does hereby covenant, agree, and declare as follows:

1. Owner is lawfully seized of the property and possessed of said land and has good right to make the following declarations and covenants.
2. Owner has prepared and submitted to City of Spring Hill a stormwater Long Term Maintenance Plan (the "Plan") acceptable to City of Spring Hill, a copy of which is attached hereto, and shall thereafter provide for adequate long-term maintenance and continuation of the stormwater control measures as described in the Plan to ensure that all stormwater facilities ("Facilities") and systems ("Systems") required by the Plan are and remain in proper working condition in accordance with the Plan and with all applicable rules, regulations, and laws set forth by the City of Spring Hill. Owner shall perform preventive maintenance activities at intervals described in the inspection schedule included in the Plan, along with necessary landscaping (grass cutting, etc.) and trash removal as part of regular maintenance.
3. Owner shall submit to City of Spring Hill a report every five years of an inspection performed by a licensed professional engineer, a licensed landscape architect, or other qualified professional familiar with applicable SCM design and maintenance requirements. This report shall be submitted on July 1<sup>st</sup>.
4. Owner hereby accords to the City of Spring Hill and its employees, agents, and contractors a non-exclusive perpetual right of entry from public rights-of-way to the Systems and Facilities at reasonable means and in a reasonable manner for the purpose of inspecting the System and Facilities, and, if necessary, as contemplated in Sec 6 below, to conduct maintenance and repair to the Systems and Facilities.
5. If upon inspection, the City of Spring Hill determines that Owner has failed to properly maintain the Systems and Facilities in accordance with the Plan, the Owner acknowledges that City of Spring Hill will have the authority to order the Owner to perform such maintenance within ten (10) days. In the event the maintenance is not performed within the specified time frame, Owner shall allow the City of Spring Hill to enter the property and take all reasonable steps to maintain the Systems and facilities. All expenses incurred by the City of Spring Hill in the maintenance or repair of the Systems and Facilities shall be billed to the Owner and shall be paid by the Owner within one hundred and twenty (120) days of work being performed. Should payment not be received within the specified time frame, a lien against the property will be filed for the indicated amount and, in addition, and without limitation, any accrued court costs and attorney fees.

6. This agreement shall become void if the structures on the Property are demolished or the Property is prepared for redevelopment and the Engineering Director certifies that all portions of the public stormwater system on the Property have been restored to the existing condition of the day of the execution of this instrument.

The Owner shall provide this executed document after recording to City of Spring Hill for record keeping of this Maintenance Agreement. Upon the recording of this Maintenance Agreement in the office of the Register of Deeds \_\_\_\_\_ County, Tennessee, the foregoing restrictions and covenants shall run with the land and shall be binding on Owner and all subsequent owners of the Property (or any portion thereof) and shall insure to the benefit of and be enforceable by City of Spring Hill, its successors, and assigns.

The City of Spring Hill's failure to exercise its enforcement rights in any particular situation shall not be deemed a waiver of them. Owner, for itself and its successors in interest, further covenants to warrant and forever defend City of Spring Hill's enforcement rights regarding the foregoing restrictions and covenants against the adverse claims of all persons. Any plat recorded at or after the date of the filing of this Maintenance Agreement shall reference the instrument number where this Maintenance Agreement and its attachments are recorded and contain a note that the Owner is responsible for maintaining the Systems and Facilities. Notwithstanding the foregoing, each Owner of the Property shall only be liable hereunder during its ownership period of the Property.

The foregoing agreement may not be modified or amended except by a recorded instrument signed by the Owner and City of Spring Hill (the discretion to do so on behalf of City of Spring Hill may be exercised by the City Administrator or their designee), or their respective successors or assigns, and shall not be extinguished by merger of title or otherwise.

**OWNER:** \_\_\_\_\_

**SIGNED:** \_\_\_\_\_

**PRINTED NAME:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

State of \_\_\_\_\_  
County of \_\_\_\_\_

Personally appeared before me, the undersigned Notary Public of the State and county mentioned, \_\_\_\_\_, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and executed this Agreement (Inspection and Maintenance Agreement for Stormwater Management Facilities and Systems for the purposes contained herein.

Witness my hand and official seal on this \_\_\_\_\_ day of \_\_\_\_\_, of the year \_\_\_\_\_.

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_