

Rain Gardens and Open Channels i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

Maintenance Tasks	Upon Establishment	Quarterly	2x During Growing Season	Annually	Once Every 3 Years	As Needed	After Rain Events
Inspect status of facility and conduct any needed repairs or stabilization	x						x
Water vegetation	x					x	
Remove and replace dead/diseased plants	x					x	
Mow grass filter strips and bioretention with turf cover		x	x				
Check inlets for accumulated grit, trash, leaves, and debris that may impede or prevent infiltration	x	x	x			x	x
Weed by hand				x		x	
Remove trash and debris		x	x			x	x
Remove sediment in pretreatment/forebay area, inlets, and outlets		x		x	x	x	
Perform maintenance inspection (see maintenance inspection sheet)	x	x	x			x	x
Rake mulch			x				
Cut back herbaceous vegetation in early spring				x			
Replenish mulch to maintain a 3" layer				x			
Prune shrubs				x		x	
Remove sediment from planting area and replace with new media to design levels					x		
Replace mulch					x		
Add plants to maintain vegetation density						x	
Remove dead, diseased and/or invasive plants				x		x	
Stabilize side slope to prevent erosion						x	

Rain Gardens and Open Channels

i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

To be submitted to the Township for Annual Submission

Maintenance Tasks	Time Frame	Dates	Notes
Remove and replace dead/diseased plants	Quarterly		
Mow grass where turf cover exists	Quarterly		
	2x During Growing Season		
Inspect inlets for accumulated grit, trash, leaves, and debris that may impede or prevent infiltration	Quarterly		
	2x During Growing Season		
Remove trash and debris	Quarterly		
	2x During Growing Season		

Rain Gardens and Open Channels i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

To be submitted to the Township for Annual Submission

Remove sediment in pretreatment/forebay area, inlets, and outlets	Quarterly		
	Annually		
Perform maintenance inspection (see maintenance inspection sheet)	Quarterly		
	2x During Growing Season		
Rake mulch	2x During Growing Season		
Weed by hand	Annually		
Cut back herbaceous vegetation in early spring	Annually		
Replenish mulch to maintain a 3" layer	Annually		
Prune shrubs	Annually		
Remove dead, diseased and/or invasive plants	Annually		

Rain Gardens and Open Channels i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

To be submitted to the Township for Annual Submission

<i>Rain Event Date</i>	<i>Maintenance Task</i>	<i>Notes</i>
	Inspect status of facility and conduct any needed repairs or stabilization	
	Check inlets for accumulated grit, trash, leaves, and debris that may impede or prevent infiltration	
	Remove trash and debris	
	Perform maintenance inspection (see maintenance inspection sheet)	
<i>Rain Event Date</i>	<i>Maintenance Task</i>	<i>Notes</i>
	Inspect status of facility and conduct any needed repairs or stabilization	
	Check inlets for accumulated grit, trash, leaves, and debris that may impede or prevent infiltration	
	Remove trash and debris	
	Perform maintenance inspection (see maintenance inspection sheet)	
<i>Rain Event Date</i>	<i>Maintenance Task</i>	<i>Notes</i>
	Inspect status of facility and conduct any needed repairs or stabilization	
	Check inlets for accumulated grit, trash, leaves, and debris that may impede or prevent infiltration	
	Remove trash and debris	
	Perform maintenance inspection (see maintenance inspection sheet)	

Rain Gardens and Open Channels i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

STA Credit Policy Manual Maintenance Policy

Basic Minimum Maintenance Requirements for O&M Plans
1. Sediment shall be removed when approximately 30% of storage volume of the facility is filled.
2. Any sinkholes shall be repaired.
3. Trash shall be removed upon discovery
4. No woody vegetation shall be allowed to grow on embankments unless called for in the facility's design.
5. Debris shall be removed from inlet, outlet, and any other structures that have the potential to clog.
6. All systems should be inspected at minimum four (4) times per year and within 48 hours after any major rain events of >1".
7. Documentation of inspections must be submitted by June 1 st of each year.
8. Provide previous year's maintenance log must be submitted by June 1 st of each year to the Township, so they can be evaluated and included in the MS4 Annual Status Report.
9. Stormwater management control structures shall remain unaltered, intact, and functioning as initially designed unless otherwise determined by staff with written notification.
10. See Pennsylvania Stormwater BMP Manual for system-specific inspection details.

Rain Gardens and Open Channels i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

Condition Standard Definitions					
	<i>Excellent – Very Good</i>	<i>Good – Acceptable</i>	<i>Fair</i>	<i>Poor – Failing</i>	<i>Township Assistance</i>
Inlet Features: <ul style="list-style-type: none"> - Stone swale - Grass channel - Level spreader - Curb cut - Subsurface conveyance - Sediment forebay 	<ul style="list-style-type: none"> - No erosion, channelization, or scouring. - No significant sediment, trash, or debris. - Curb cut or other hardscape inlet in very good condition. 	<ul style="list-style-type: none"> - Some erosion, channelization, or scouring. - Some sediment or debris but does not affect function. - Some wear on curb cut but does not affect function. 	<ul style="list-style-type: none"> - Erosion, channelization, and/or scouring present. - Sediment/debris affect water quality function but do not affect conveyance. - Some cracking, heaving or curb cut. 	<ul style="list-style-type: none"> - Erosion, channelization, or scouring and bypassing inlet present. - Sediment/debris inhibit or prevent water entering system. - Cracking/heaving of curb cut or other hardscape preventing water from entering system. 	
Side Slopes	<ul style="list-style-type: none"> - No erosion or scouring. - No evidence of ponding. 	<ul style="list-style-type: none"> - Some erosion or scouring. - Some evidence of ponding. 	<ul style="list-style-type: none"> - Erosion of side slopes affecting performance. - Ponding above expected levels. 	<ul style="list-style-type: none"> - Erosion of side slopes inhibiting performance. - Evidence of ponding higher than system design level. 	
Vegetation	<ul style="list-style-type: none"> - At least 90% of planting zone covered with healthy plants per design. <10% weeds. - Mulch 2"-4", clean edges, limited compaction. No caking. - Soil is well aerated. - No erosion, channelization or scouring. - No bare spots. - No minimal sediment or debris. - Drains within 24 hours. 	<ul style="list-style-type: none"> - At least 75% of planting zone covered with healthy plants per design. - Mulch below 2", loose edges, some compaction. - Some soil compaction. - Some erosion, channelization, or scouring. - Sediment or debris present in facility bottom, does not affect function. - Drains within 36 hours. 	<ul style="list-style-type: none"> - At least 60% of planting zone covered with healthy plants. - 20-30% weeds. - Little mulch, no defined edge, shoulder compaction. - Compacted soil. - Erosion, channelization, or scouring noticeable. - Sediment or debris inhibits water quality. - Evidence of long-term ponding (over 72 hours). 	<ul style="list-style-type: none"> - Less than 50% of planting zone covered with healthy plants. - >30% weeds. - No mulch present. - Compacted soils. - Sediment and debris inhibit water quality and conveyance. - Presence of standing water. 	
Outlet Features: <ul style="list-style-type: none"> - Stand-up pipe, overflow structure - Clean-out - Berm - Weirs, rock walls, check dams, rock swale - Grates, debris screens - Catch basins, nearest storm drain(s) 	<ul style="list-style-type: none"> - <10% sediment or debris around grates or structures. - Limited build-up of sediment behind check dams or weirs. - Rockery stable and secure. - Berm firm and level. - No sediment or debris around nearby storm drains. 	<ul style="list-style-type: none"> - Sediment blocking up to 30% of grates or structures, swales, check dams, or weirs, nearby storm drains. - Berm shows evidence of breaching. - Berm shows evidence of scouring. - Some trash or debris in outlet channel. 	<ul style="list-style-type: none"> - Sediment blocking 30-50% of grates or structures, swales, check dams, or weirs, nearby storm drains. - Berm structure needs reinforcement. - Trash or debris in outlet channel impedes water flow. 	<ul style="list-style-type: none"> - Sediment over 50% blocks grates or structures, swales, check dams, or weirs, nearby storm drains. - Berm not functioning due to blowout in one or more places. - Trash or debris in outlet prevents water flow. 	

Rain Gardens and Open Channels i.e. bioretention basins/cells, bioswales, grass swales, vegetated swales, detention/retention basins

Evaluation Worksheet						
Location:	Installed (mm/yyyy):	Inspection (mm/dd/yyyy):			Inspector:	
		Excellent – very good	Good – acceptable	Fair	Poor – failing	Township Assistance
Inlet Features: <i>check all that apply</i> <input type="checkbox"/> stone swale <input type="checkbox"/> grass channel <input type="checkbox"/> level spreader <input type="checkbox"/> curb cut <input type="checkbox"/> subsurface conveyance <input type="checkbox"/> sediment forebay	Approximate <i>Length x Width:</i> Image(s) of Inlet(s):					
Side Slopes	Approximate <i>Perimeter:</i> Image of Side Slopes:					
Vegetation ~ % of perennials: _____% ~ # of shrubs: _____ ~ # of trees: _____	Approximate <i>Shape</i> and <i>Area:</i> Image of Vegetation:					
Outlet Features: <i>check all that apply</i> <input type="checkbox"/> stand-up pipe <input type="checkbox"/> overflow structure <input type="checkbox"/> clean-out <input type="checkbox"/> berm <input type="checkbox"/> weirs, rock walls, check dams, rock swale <input type="checkbox"/> grates, or debris screens <input type="checkbox"/> catch basins, or nearest storm drain(s)	Approximate <i>Length x Width:</i> Image(s) of Outlet(s):					

To be submitted to the Township for Annual Submission