

Bioretention Operation and Maintenance Agreement

I will keep a maintenance record on this BMP. This maintenance record will be kept in a log in a known, set location. Any deficient BMP elements noted in the inspection will be corrected, repaired or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the removal efficiency of the BMP.

Important operation and maintenance procedures:

- Immediately after the bioretention cell is established, the plants will be watered twice weekly if needed until the plants become established (commonly six weeks).
- Snow, mulch of any other material will NEVER be piled on the surface of the bioretention cell.
- Heavy equipment will NEVER be driven over the bioretention cell.
- Special care will be taken to prevent sediment from entering the bioretention cell.
- Once a year, a soil test of the soil media will be conducted.

After the bioretention cell is established, I will inspect it once a month and within 24 hours after every storm event greater than 1.0 inches. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How I will remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash / debris.
The perimeter of the dry detention basin	Areas of bare soil and/or erosive gullies have formed.	Re-grade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
The inlet device: pipe or swale	The pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment off-site.
	The pip is cracked or otherwise damaged (if applicable).	Replace the pipe.
	Erosion is occurring in the swale (if applicable).	Re-grade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.

	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and clogged stone and replace with clean stone.
The pretreatment area	Flow is bypassing pretreatment area and/or gullies have formed	Re-grade if necessary to route all flow to the pretreatment area. Reestablish the area after grading.
	Sediment has accumulated to a depth greater than three inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP and reestablish the pretreatment area.
	Erosion has occurred or riprap is displaced.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand.
The bioretention cell: vegetation	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices.
	Plants are dead, diseased or dying.	Determine the source of the problem; soils, hydrology, disease, etc. Remedy the problem and replace the plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	tree stakes / wires are present six months after planting.	Remove tree stakes/ wires (which can kill the tree if not removed).
The bioretention cell: soil and mulch	Mulch is breaking down or has floated away.	Spot mulch if there is only random void areas. Replace the whole mulch layer if necessary. Remove the remaining mulch and replace with triple shredded hard wood mulch at a maximum depth of three inches.

	Soils and / or mulch are clogged with sediment.	Determine the extent of the clogging – remove and replace either just the top layers or the entire media as needed. Dispose of the soil in an appropriate off-site location. Use triple shredded hard wood mulch at a maximum depth of three inches. Search for the source of the sediment and remedy the problem is possible.
	An annual soil test shows that pH has dropped or heavy metals have accumulated in the soil media.	Dolomitic lime shall be applied as recommended per the soil test and toxic soils shall be removed, disposed of properly and replaced with new planting media.
The underdrain system (if applicable)	Clogging has occurred.	Wash out the underdrain system.
The drop inlet	Clogging has occurred.	Clean out the drop inlet. Dispose of the sediment off-site.
	The drop inlet is damaged.	Repair or replace the drop inlet.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the City of Kings Mountain Stormwater Department 704-734-4501 stormwater@cityofkm.com

I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed above. I agree to notify The City of Kings Mountain Stormwater Department of any problems with the system or prior to any changes to the system or responsible party.

Project name: _____

BMP type: _____

Print name: _____

Title: _____

Address: _____

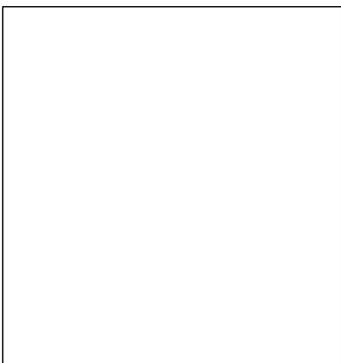
Phone; _____

Signature: _____

Date: _____

Note: the legally responsible party should not be a homeowners association unless more than 50% of the lots have been sold and a resident of the subdivision has been named president.

I, _____, a Notary Public for the State of _____, County of _____, do hereby certify that _____ personally appeared before me this _____ day of _____, _____, and acknowledged the due execution of the forgoing dry detention basin maintenance requirements. Witness my hand and official seal,



SEAL

My commission expires _____