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Green Infrastructure/Low Impact Development Program

National Pollutant Discharge Elimination System
Phase II Municipal Separate Storm Sewer System
Permit

Prepared for:

City of Perry

August 2020



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1. BACKGROUND

As required in the National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Separate Storm Sewer System (MS4) permit effective December 6, 2017, the City of Perry (City) must develop a Green Infrastructure (GI)/Low Impact Development (LID) program to further encourage, and track the use of GI/LID stormwater best management practices (BMPs). The purpose of this program will be to describe the City's procedures for evaluating the feasibility and site applicability of different GI/LID techniques and practices. The program will also highlight which GI/LID practices/structures the City already implements or would consider. Finally, the program will describe how the City will inspect and maintain GI/LID structures.

The City is located in west-central Houston County and is 26.3 square miles in size. The limits of the City extend northwest into Peach County and is located on Big Indian Creek.

2. PHASE II PERMIT REQUIREMENTS

The City's Phase II MS4 permit describes in detail what is expected of the City when reporting on its GI/LID activities. Table 2.1 below outlines the GI/LID program elements within the permit.

2.1 Table 2.1 GI/LID Program Elements

GI/LID Program Elements	Measurable Goals
1. Legal Authority	1.a. The permittee shall continue to review and revise, where necessary, building codes, ordinances, and other regulations to ensure they do not prohibit or impede the use of GI/LID practices, including infiltration, reuse, and evapotranspiration. At a minimum, the permittee shall assess those regulations governing road design and parking requirements. During the review, the permittee should consider the inclusion of incentives for use of GI/LID practices into the regulatory documents.

2. GI/LID Program	2.a. For those permittees with a population exceeding 10,000 at the time of this permit issuance, develop a program describing the GI/LID practices (e.g. better site planning techniques, better site design techniques) to be implemented by the permittee. The program shall include: - procedures for evaluating the feasibility and site applicability of differed GI/LID techniques and practices to be considered; - the GI/LID structures allowed to be constructed within the permittee's jurisdiction; - procedures for the inspection and maintenance of the GI/LID structures, including permittee-owned structures, publicly-owned structures owned by other entities, and privately-owned non-residential (e.g. who inspects, who maintains, inspection and maintenance schedule, method of documentation of inspection and maintenance activities). The GI/LID program must be submitted to EPD by February 15, 2020. The program must be included in the SWMP and must be implemented by the permittee.				
3. GI/LID Structure Inventory	3.a. Annually update an inventory of water quality related GI/LID structures located within the permitted area and at a minimum, constructed after March 7, 2014, including the total number of each type of structure. The inventory must, at a minimum, include permittee-owned GI/LID structures, those publicly-owned structures owned by other entities, and privately-owned non-residential GI/LID structures. Track the addition of new water quality-related GI/LID structures through the plan review process and ensure the structures are added to the inventory.				
4. GI/LID Inspection and Maintenance Program	 4.a. Beginning in 2020, conduct inspections and/or ensure inspections are conducted on 100% of the GI/LID structures included in the inventory created in BMP 5.a, within a 5-year period. The inspections must be completed in accordance with the schedule submitted in the GI/LID program submitted in BMP 6 above. Provide documentation of the inspections conducted during the reporting period in each annual report. 4.b. Conduct maintenance on the permittee-owned GI/LID structures, as needed. Provide the number of structures and percentage of the total structures maintained during the reporting period in each annual report. 4.c. Implement the maintenance procedures in accordance with the GI/LID program for ensuring publicly-owned structures owned by other entities and privately-owned non-residential GI/LID structures are maintained as needed. Provide documentation of these activities in each annual report. 				

3. GREEN INFRASTRUCTURE/LOW IMPACT DEVELOPMENT PRACTICES/STRUCTURES

The City has identified six structures, outlined in Table 3.1, which will compose the City's GI/LID Program and inventory. This inventory will contain all publicly owned and non-residential GI/LID structures constructed after March 7, 2014. The inventory includes bioretention areas, infiltration practices, permeable bricks/blocks, pervious concrete, porous asphalt, and rainwater harvesting. These have been outlined in further detail in Table 3.1 below. Additionally, any other structure/practice evaluated and deemed appropriate by the City Engineer may be included. The initial inventory will be reported in a table format that will include the following information:

- No.
- Name
- Project #
- Ownership (Private or Public)
- Structure Type
- Completion Date

In addition to the type and location of each structure, the table will also include a summary of the total number of each structure. In the future, all new structures identified during the plan review process shall be added to the inventory. The City's current inventory of GI/LID structures has been included in Appendix C. Annually, this inventory will be revised to include any new structures identified during the plan review process.

3.1 Table 3.1 GI/LID Practices and Structures

Structure	Description
Bioretention Areas	A biorentention area is a shallow stormwater basin or landscaped area with well-draining soils, generally composed of sand, fines, and organic matter, and vegetation to capture and treat stormwater runoff. The basin or main treatment area of the bioretention area includes plants to aid in the filtration and infiltration of the stormwater flowing through the practice. An underdrain may be placed in the bioretention area to collect runoff that has filtered through the soil layers and pipe it to the storm sewer system or a nearby water body. ("Georgia Stormwater Management Manual,"2016)

Structure	Description
Infiltration Practices	Infiltration practices, which may also by classified as a runoff reducing low impact development practices, are shallow excavations, typically filled with stone or an engineered soil mix, that are designed to intercept and temporarily store post-construction stormwater runoff until it infiltrates into the underlying and surrounding soils. If properly designed, they can provide significant reductions in post-construction stormwater runoff rates, volumes and pollutant loads. Some of the advantages of this practice are: provides for groundwater recharge, good for small sites with porous soils and reduces post-construction stormwater runoff rates, volumes and pollutant loads. Additionally, this practice is suitable for 100% runoff reduction credit. ("Georgia Stormwater Management Manual," 2016)
Permeable Bricks/Blocks	Permeable bricks/blocks are pavers with void areas between the bricks or blocks that are generally filled with pervious materials such as small pieces of gravel, or top soil if a grid is used. Beneath the bricks/blocks is a base layer of aggregate that acts as a holding area for stormwater runoff while still providing structural support for the road. This practice provides enough structural support so that cars can drive over them or they can be used in parking lots. Permeable brick/blocks are not recommended in areas with high traffic volume or heavy trucks. These systems provide water quality benefits in addition to groundwater recharge and a reduction in stormwater volume. ("Georgia Stormwater Management Manual," 2016)
Pervious Concrete	Pervious concrete is a mixture of coarse aggregate, Portland cement and water that allows for rapid infiltration of water and overlays a stone aggregate reservoir. This reservoir provides temporary storage as runoff infiltrates into underlying permeable soils and/or out through an underdrain system. Some of the advantages of this practice are: well suited in capturing "first flush" water quality volume, reduces standing water on pavement, and provides reductions in runoff volume, stormwater runoff, and impervious area. Additionally, this practice is suitable for 100% runoff reduction credit if an underdrain is not used. ("Georgia Stormwater Management Manual," 2016)
Porous Asphalt	Porous asphalt is asphalt with reduced sands or fines and larger void spaces, which allow water to drain through it. Porous asphalt allows water to infiltrate into the subsoil below the paved surface and base layer. This aggregate base layer acts as a structural layer and container to temporarily hold stormwater. Some of the advantages of this practice are: high level of pollutant removal other than TSS, can be used as a pretreatment for other BMPs for pollutants other than TSS, and surface flow reduction of peak flows, volume, and stormwater runoff. Additionally, this practice is suitable for 100% runoff reduction credit if an underdrain is not used. ("Georgia Stormwater Management Manual," 2016)

Structure	Description				
Rainwater Harvesting	Rainwater harvesting is a common stormwater management practice used to catch rainfall and store it to be used later. Gutters and downspout systems are typically used to collect the water from roof tops. Rainwater harvesting systems can be either above or below the ground. Once captured in the storage tank, the water may be used for non-potable indoor and outdoor uses. If properly designed, rainwater harvesting systems can significantly reduce post-construction stormwater runoff rates, volumes and pollutant loads on development sites. Rainwater harvesting also helps reduce the demand on public water supplies, which in turn helps protect aquatic resources, such as groundwater aquifers, from drawdown and seawater intrusion. ("Georgia Stormwater Management Manual," 2016).				

3.2 Procedures for Evaluating GI/LID Practices and Structures

As required in the NPDES Phase II MS4 permit effective December 6, 2017, the City must include procedures for evaluating the feasibility and site applicability of different GI/LID techniques and practices, and various structure and practices to be considered. These procedures will include the use of the requirements of the Georgia Stormwater Management Manual (GSMM). By no means is the City requiring future development to incorporate GI/LID structures and techniques. The City encourages the use of GI/LID, but understands that GI/LID structures are not always the most feasible option (e.g. unsuitable soils, project cost, property size limitation). At this time the City may address stormwater runoff using either Option (a) or Option (b) outlined in the Stormwater Runoff Quality/Reduction section on Page 22 and Page 23 of the permit. Beginning December 6, 2020 the City must address all stormwater runoff with Option (a) to the maximum extent practicable. The determination by the City that it is infeasible to apply the stormwater runoff quality/reduction standard, on part or all of a project, must be documented with the site plan review documents. In Appendix B, a flow chart has been developed to determine the feasibility of using GI/LID practices.

4. INSPECTION AND MAINTENANCE

4.1 Inspection

As directed by GAEPD, the City will inspect 100 percent of its publicly-owned and privately-owned non-residential GI/LID structures within a 5-year period. The inspection checklists provided in the latest edition of the Georgia Stormwater Management Manual (GSMM) will be used during the inspection process. Inspection checklists used to inspect each structure during the reporting period will be provided in each annual report. Example inspection checklists are provided in Appendix A.

4.2 Evaluating Effectiveness of BMPs

During the inspection process all implemented BMPs will be evaluated for effectiveness. Using the approved checklist for each BMP, the inspector will evaluate if the BMP is operating as it was designed. If the inspector determines that the BMP is not operating properly, then a maintenance recommendation will be made. Section 4.3 outlines the maintenance protocol the City will use for both public and private non-residential BMPs.

4.3 Maintenance

Like all stormwater infrastructure, green infrastructure requires regular inspections and maintenance to assure proper function. Appropriate operation and maintenance activities ensure that green infrastructure will continue to function properly and produce expected water quality and environment benefits, protect public safety, meet legal standards, and protect the City's financial investment. The City is responsible for maintenance of all public (owned by the City) GI/LID structures. At this time the City intends on using the Post-Construction ordinance to enforce maintenance requirements of GI/LID structures that are considered non-residential. The following section of the City's Stormwater Management ordinance outlines the use of maintenance agreements:

Section7-1.4 (H)(2) Maintenance Covenants – Maintenance of all stormwater management facilities shall be ensured through the creation of a formal maintenance covenant that must be approved by the administrator and recorded into the Final Plat prior to final approval. As part of the covenant, a schedule shall be developed for when and how often maintenance will occur to ensure proper function of the stormwater management facility. The covenant shall also include plans for periodic inspections to ensure proper performance of the facility between scheduled cleanouts.

The City of Perry, in lieu of a maintenance covenant, may accept dedication of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

An example of a typical maintenance agreement has been included in Appendix D of this program. If during the inspection process a deficiency is found, the City will notify the owner, by letter, and will be given a timeframe to remediate the problem. The City's Enforcement Response Plan (ERP) will be used during this process to assist the violators in reaching and maintaining compliance, while providing escalating enforcement responses to address repeat and/or continuing violations.

Maintenance plans will vary depending on the type of structure and practice. Table 4.3 provides an on overview of green infrastructure strategies and the general types of associated maintenance activities and maintenance frequency. This table shall be used as guide when determining maintenance needs for both public and non-residential private structures.

4.4 Table 4.3 GI/LID Maintenance Activities

Strategy	Maintenance Activities	Frequency
	Remove trash and debris	As needed
	Remove and replace dead or damaged plants	As needed
Bioretention Areas	Mow area as necessary, ensuring grass clippings are not placed in the practice	As needed
	Observe infiltration rates after rain events. Bioretention areas should have no standing water within 24 hours of a storm event	As needed

	Check for bare areas, exposed roots, and cracks in soil	Semi-annually in spring and fall
	Trim plating material	As needed
8,500	Remove trash and debris	Monthly
	Ensure area is stabilized. Plant vegetation as needed.	Monthly
	Inspect pretreatment devices for sediment accumulation. Remove sediment, trash and debris.	Annually
Infiltration Practices	Inspect the practice following rainfall events (specifically large rainfall events). Check observation well to ensure that complete drawdown has occurred within 72 hours after the end of a rainfall event. Failure to drawdown within this timeframe may indicate infiltration practice failure.	Annually
	Remove aggregate and install clean, washed trench aggregate	Upon Failure
	It may be necessary to replace piping, filter fabric, etc.	Upon Failure
	Make sure that there is no standing water in the bricks/blocks between storms	Monthly during warm weather
,X1	Remove trash and debris	As needed
Permeable	Vacuum sweep to help keep surface free of sediment	As needed
Bricks/Blocks	Make sure that there is no evidence of deterioration or cracking of the bricks/blocks	Monthly during warm weather
	Mow/trim grass near the bricks/block and remove clippings from area	Monthly during warm weather
	Flush underdrain system and check for signs of clogging	Annually
	Check to ensure the pavement surface is not clogging	As needed
	Remove trash and debris	As needed
Pervious	Vacuum sweep to help prevent clogging and ensure water passes through the pavement (consult product recommendations)	Annually
Concrete	Make sure that there is no evidence of deterioration or cracking of the concrete	Monthly during warm weather
	Repair or replace any damage to the asphalt	Monthly
	Flush underdrain system and check for signs of clogging	Annually
	Check to ensure the pavement surface is not clogging	As needed
	Remove trash and debris	As needed
Porous Asphalt	Vacuum sweep to help prevent clogging and ensure water passes through the pavement (consult product recommendations)	Annually
	Repair or replace any damage to the asphalt	Monthly
· ·	Flush underdrain system and check for signs of clogging	Annually
	Check for visible damage or leaks and repair	Spring and fall, or as needed
Rainwater	Check for any debris or obstruction in the gutter, downspout, or diverter	Spring and fall, or as needed
Harvesting	Inspect storage tank for algae bloom. Treat as necessary	Spring and fall, or as needed
	Disconnect, drain and clean the cisterns for winter	Annually before winter

Check system for sediment. Clean out the tank when the sediment is more than 5% of the volume in the cistern.	Annually
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All suggested maintenance activities have been copied from the Operations & Maintenance Guidance Document of the "Georgia Stormwater Management Manual Volume 2: Technical Handbook, 2016 Edition". The guidance document includes more maintenance suggestions and can be found on the following pages

Bioretention Areas – Page 7 Infiltration Practice – Page 51 Permeable Bricks/Blocks – Page 65 Pervious Concrete – Page 71 Porous Asphalt – Page 75 Rainwater Harvesting – Page 83

References

"Low Impact Development/Green Infrastructure/ Best Management Practices" Retrieved from https://nacto.org/docs/usdg/sustainable_stormwater_management_hudson_county.pdf, Accessed May 29, 2017.

"Types of Green Infrastructure" Retrieved from http://www.nyc.gov/html/dep/html/stormwater/combined_sewer_overflow_bmps.shtml, Accessed May 29, 2017.

"Elements of a Green Infrastructure Maintenance Business Plan" (2015, April). Retrieved from https://www.epa.gov/sites/production/files/2015-10/documents/mmsd_tech_assistance.pdf, Accessed May 29, 2017.

Atlanta Regional Commission. Georgia Stormwater Management Manual 2016 Edition, http://atlantaregional.org/georgia-stormwater-management-manual, Accessed May 30, 2017.

Appendix A

Bioretention Area Inspection Checklist

Facility Name:	
Facility Location:	
Inspector:	
Date of Inspection:	
Time:	

	Bior	etention A	rea		
Maintenance Item	Condition			9	
Mantenance Rem	Good	Marginal	Poor	N/A*	Comment
	Ger	neral Inspecti	on		
Access to the site is adequately maintained for inspection and maintenance					
Area is clean (trash, debris, grass clippings, etc. removed)					
	Ir	nlet Structure			
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet structure is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet structure					
Water is going through structure (i.e. no evidence of water going around the structure).					
	Pretreat	tment (choose	e one)		
Forebay – area is free of trash, debris, and sediment.					
Weir – areas is free of trash, debris, and sediment is less than 25% of the total depth of the weir.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Rock Lined Plunge Pools – areas is free of trash debris and sediment. Rock thickness in pool is adequate.					

Maintanana Itaur	Condition				0
Maintenance Item	Good	Marginal	Poor	N/A	Comment
	M	ain Treatmen	t		•
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					
No evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
Vegetation within and around practice is maintained per landscaping plan. Grass clippings are removed.					
Mulching depth of 3-4 inches is maintained. Comment on mulch depth.					
Native plants were used in the practice according to the planting plan.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, tips of leaves turning brown or yellow, blackened roots, etc.)					
Plants seem to be healthy and in good condition. Comment on condition of plants.					
	Eme	rgency Overfl	ow		
Emergency overflow is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
	Oı	utlet Structure	9		
Outlet structure is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					

Maintenance Item		Condi	tion		1.
Wantenance item	Good	Marginal	Poor	N/A*	Comment
		Results			
Overall condition of Bioretention Area:					
	Addit	ional Commer	nts		
Notes: *If a specific maintenance item w	as not check	ed, please exp	olain why i	n the appropri	iate comment box.

Infiltration Practice Inspection Checklist

Facility Name:		
Facility Location:		
Inspector:		ıf i
Date of Inspection:	9	
Time:		=

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Maintenance Item		Condi	tion		Co	mment
ivialiteriance item	Good	Marginal	Poor	N/A*	7	ninent
3	Ge	neral Inspection	on			
Access to the site is adequately maintained for inspection and maintenance						
Area is clean (trash, debris, grass clippings, etc. removed)					egi.	2
		Inlet		1.0		**
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc. Drainage ways are in good condition.					22	
Area around the inlet structure is mowed and grass clippings are removed.						
No evidence of gullies, rills, or excessive erosion around the inlet structure						= 18
Water is going through structure (i.e. no evidence of water going around the structure).						2 122
Diversion structure (high flow bypass structure or other) is free of trash, debris, or sediment. Comment on overall condition of diversion structure and list type.	2				,	=
	Pretrea	tment (choose	e one)	31	g h	
Forebay – area is free of trash, debris, and sediment.						
Forebay – no undesirable vegetation						

Maintenance Item		Condi	Commont		
Maintenance item	Good	Marginal	Poor	N/A*	Comment
Forebay – no signs of erosion, rills, or gullies. Erosion protection is present on site.					
Forebay – no signs of standing water					
Filter Strip – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion or sediment accumulation.					
Filter Strip – No signs of unhealthy grass, bare or dying grass. Grass height is maintained to a height of 6-15 inches.					
Filter Strip – No signs of erosion, rills, or gullies. Erosion protection is present on site.					
Filter Strip – No undesirable vegetation.					
Filter Strip – No signs of standing water (examples include: stains, odors, mosquito larvae, etc).					
	M	ain Treatment	1		
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
No signs of ponding water more than 48 hours after a rain storm event (examples include: stains, odors, mosquito larvae, etc).					
No undesirable vegetation growing within the practice.					
Native plants were used in the practice according to the planting plan.					2
Observation well is capped and locked when not in use.					
Flow testing has been performed on infiltration practice to determine if underdrain is clogged.					
Emer	gency Ove	erflow and Ou	tlet Struct	ture	
Area is free of trash, debris, and sediment.					

No evidence of erosion, scour, or flooding around the structure.	There is	, ,	38 0	
No signs of sediment accumulation.				
Grass height of 6-15 inches maintained.				V 1.7

	Results		
Overall condition of Infiltration Practice:			- 13 and 14
	Additional Comments	- H	
			×

Permeable Paver System Inspection Checklist

Facility Name:	
Facility Location:	
Inspector:	
Date of Inspection:	
Time:	

	Permea	ble Paver	System		
Maintenance Item		Condi	tion		
Maintenance Item	Good	Marginal	Poor	N/A*	Comment
	Ge	neral Inspecti	on		
Access to the site is adequately maintained for inspection and maintenance					
Area is clean (trash, debris, grass clippings, etc. removed).					
Area around the practice is mowed and grass clippings are removed. No signs of bare or dead grass.					
No evidence of gullies, rills, or erosion around the practice.					
Water is permeating the bricks/blocks (i.e. no evidence of water going around the practice).					
Bricks/blocks are structurally sound. No signs of cracks or splitting.					
Aggregate between bricks/blocks is reasonable.					
No evidence of long-term ponding or standing water in the practice.					
Grass in the concrete grid is healthy, no dead grass or bare spots.					
Grass in the concrete grid is mowed and grass clippings are removed.					
Structure seems to be working properly. No signs of the bricks/blocks settling. Comment on overall condition of bricks/blocks.					
Vegetation within and around practice is maintained. Grass clippings are removed					

Maintenance Item		Condi	Camanant				
Waintenance item	Good	Marginal	Poor	N/A*	Comment		
No exposed soil near the bricks/blocks that could cause sediment accumulation within the practice.					4 H		
Cleanout caps are present and not missing (if applicable).							
Results							
Overall condition of Permeable Bricks/Blocks:							

	2			Add	itional Co	mments					
	- (*)	N.									
Notes: *	If a specific ma	aintenance it	em was	not chec	ked, plea	se explain	why ir	the ap	propriate cor	nment box	

Pervious Concrete Inspection Checklist

Facility Name:	
Facility Location:	
Inspector:	
Date of Inspection:	
Time:	

	Pervi	ous Conc	rete		
Maintenance Item		Condi	tion		C
Maintenance item	Good	Marginal	Poor	N/A*	Comment
	Gen	eral Inspection	on		
Access to the site is adequately maintained for inspection and maintenance					
Area is clean (trash, debris, grass clippings, etc. removed).					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
No evidence of long-term ponding or standing water in the practice (examples include: stains, odors, etc).					
Structure seems to be working properly. No signs of concrete settling or cracking. Comment on overall condition of concrete.					
Vegetation around practice is maintained. Grass clippings are removed.					
No exposed soil near the concrete.					
Cleanout caps are present and not missing (if applicable).					
The underdrain system or trench has been flushed properly and there is no sign of clogging.					
		Results			
Overall condition of Pervious Concrete:					

	Additional Comme	ents	
	W W	£ 5	
9			
*			
8.88			
Notes: *If a specific maintenance	item was not checked, please ex	xplain why in the appropriate comme	nt box.

Porous Asphalt Inspection Checklist

Facility Name:	
Facility Location:	
Inspector:	
Date of Inspection:	
Time:	

	Por	ous Asph	alt		
Maintenance Item		Condi	0		
	Good	Marginal	Poor	N/A*	Comment
	Ger	neral Inspection	on		
Access to the site is adequately maintained for inspection and maintenance					
Area is clean (trash, debris, grass clippings, etc. removed).					
Filter Strip (if applicable) – areas is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Asphalt is structurally sound. No signs of cracks or raveling (disintegration of material from surface down).					
No evidence of long-term ponding or standing water in the practice.					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
Vegetation around practice is maintained. Grass clippings are removed.					
No exposed soil near the asphalt.					
Cleanout caps are present and not missing.					
The underdrain system has been flushed properly and there is no sign of clogging (if applicable).					
Emergency overflow is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					

		Results		
Overall condition of Porous Asphalt:	Yan in a s		e 8 - 5.	

Additional Commen	ts
5.	
* **	
1 g ii	
a Pa	
	9 8
Notes: *If a specific maintenance item was not checked, please exp	lain why in the appropriate comment box.

Rainwater Harvesting Inspection Checklist

Facility Name:	
Facility Location:	
Inspector:	
Date of Inspection:	
Time:	

	Rainw	ater Harve	sting		
Maintenance Item		Condi			
	Good	Marginal	Poor	N/A*	Comment
	Ge	neral Inspecti	on		
Access to the site is adequately maintained for inspection and maintenance					
Area is clean (trash, debris, grass clippings, etc. removed)					
Gutters and downspouts are free of trash, debris, etc.					
Leaf screens are clean and in good condition.					
First flush diverter is working properly and in good condition (if applicable).					
Roof washer is working properly and in good condition (if applicable).					
Cistern inlet and downspout fits tightly.					
Cistern tank is clean and free of sediment.					
Cistern is free of indication of algal blooms.					
Plants being watered from the rainwater harvesting system seem to be healthy and in good condition. Comment on condition of plants.					
No signs of overflow valve leaking (stains, dampness).					
Cistern is in good condition structurally, no signs of cracking or leaking					
Performance of pump matches pumping details (if applicable)					

		Results			
Maintenance Item		Condition			
Maintenance item	Good	Marginal	Poor	N/A*	Comment
Overall condition of Rainwater Harvesting:					
	Addi	tional Comme	ents		
Notes: *If as specific maintenance its comment box.	em was not ched	cked, please ch	neck N/A a	nd explain why	in the appropriate

Appendix B

GREEN INFRASTRUCTURE/LOW IMPACT DEVELOPMENT (GI/LID) EVALUATION

FACILITY NAME:		ANALYSIS BY:			
FACILITY LOCATION:		FACILITY TYPE:	:		
DATE OF ANALYSIS:					
Install BMPs per Plo Enjoy Cleaner Wa	ter		Start U Have GI/LID practices been incorporated into the project?		
List GI/LID Practices:	Y	L	N		
The use of GI/LID is not appropriate due to poor soil conditions.	Can the soi tilled or exca if more favor conditions identified de within the	vated rable are	Are the soils suitable for the growth of plants and infiltration of stormwater. (Infiltration rate of at least 0.5"/hr and a min. depth of 2ft to water table)	List Quality Issues:	
The use of GI/LID is not appropriate due to size of	Can the pro area be expo	oject anded	Y J	List Property Issues:	
property.	N with additional land or easer to accommon GI/LID pract	ments N odate	area to accommodate GI/LID practices? Y	,	
The use of GI/LID is not possible due to the lack of funding.	Evaluate alternative funding option. (Grants, loans, community involvement)	Can money be added to the project budget to include GI/LID practices?	Will the addition of GI/LID practices increase total project cost by 20%?	List Funding:	
t GI/LID Practices:	Re-consider the use of practices as part of the of managing stormwater	pproach to	N		

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Appendix D

Appendix D

Above Space for Recording

After recording return to: City of Perry Attn: City Attorney P.O. Box 2030 1211 Washington St. Perry, GA 31069

STATE OF GEORGIA

City of Perry Stormwater Best Management Practices Operations and Maintenance Agreement

COUNTY OF HOUSTON		
This Agreement, made and entered into this	day of _	, 201, by and between (hereinafter called the "Landowner") as party of the
first part, and the City of Perry, Georgia, a po of the second part, each a "party" and collect		on of the state of Georgia, (hereinafter called the "City") as party

RECITALS

- A. The Landowner is the owner of certain real property in the City of Perry, Houston County, Georgia, more particularly described in Exhibit "A" attached hereto and by this reference made a part of this Agreement (the "Property").
- B. The Landowner is proceeding to build and develop the Property.
- C. The Site Plan/ Subdivision Plan known as ______ (the "Plan"), a copy of which is attached hereto as Exhibit "B" and by this reference is expressly made a part hereof, as approved by the City, provides for management of stormwater within the confines of the Property through the use of Best Management Practices ("BMP").
- D. The City, and the Landowner, its successors and assigns, including any associated homeowners or property owners association, agree that the health, safety, and welfare of the residents of Perry, Georgia and the protection and maintenance of water quality require that on-site stormwater Best Management Practices be constructed and maintained on the Property.
- E. The City requires, through the implementation of the Plan, that stormwater Best Management Practices as shown on and required by the Plan and the City's Land Management Ordinance be constructed and adequately maintained by the Landowner, its successors and assigns.