

#### **Maintenance Procedures**

Maintaining the StormGarden system is necessary to continue the effective pollutant removal from stormwater runoff prior to discharge into the stormdarin system. Ongoing maintenance will also extend the life of the filter media and the StormGarden system. As the StormGarden filters stormwater runoff, pollutants accumulate within the filter media and floating debris such as silt, trash and leaves accumulate on top of the media underneath the concrete slab. When an excessive amount of silt and trash build up on top of the media, the flow-through rate of the media is reduced, thus decreasing the capacity of the system. Regular replacement of the top mulch layer helps stop the accumulation of such sediment and debris and maintaining the overall performance of the system.

Rotondo Environmental Solutions (RES) includes a 1-year maintenance plan with each StormGarden purchase. The included maintenance plan consists of a maximum of 2 scheduled visits. If additional visits are required due to excessive sediment and trash loading, they will be performed by RES for an additional charge. The start of the maintenance plan begins when the system is activated for full operation. Full operation is defined as the unit installed, curb and gutter and transitions in place, and the unit activated by RES which includes the mulch and plant installed and the temporary throat protection removed.

Activation cannot occur until the site is fully stabilized, which means full landscaping, grass cover, final paving and sweeping is complete. Maintenance visits are scheduled seasonally. The spring visit cleans up after winter loads which include salts and sands, and the fall visit is to remove excessive leaves and debris.

It is the responsibility of the owner to provide adequate irrigation when necessary to the plant of the StormGarden system. Cleanup due to major contamination such as oils, chemicals, toxic spills, etc. will result in additional costs and are not covered under the 1-year maintenance plan provided by RES. Should a major contamination event occur, the owner must block off the outlet pipe to the StormGarden unit (where the cleaned runoff drains to from the StormGarden, such as the bypass inlet) and block off the throat of the StormGarden. RES should be informed immediately.

Each maintenance visit consists of the following tasks:

- Visual inspection of StormGarden unit and surrounding area
- Removal of tree grate and erosion control stones
- Removal of sediment, trash, debris and mulch
- Mulch replacement
- Clean and replace erosion control stones
- Evaluation of plant and pruning or replacement if necessary
- Clean area around StormGarden unit
- Maintenance report



**Project Information** 

#### **Brookside Square - Filterra - Inspection & Maintenance**

05/24/2016	
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Initial Observations  Standing Water in Bypass No V Damage to Tree Grate? No V Is Bypass Clear  Waste  Mulch  Silt Clay Cups Bags Leaves Buckets Removed  2  Plant height above grate  7' 1"  Damage to Tree Grate? No V Is Bypass Clear  Mulch  Stones Replaced Bags of Mulch Added  3  Plant Height above grate  7' 1"  Damage to Plant No V Plant Replaced	Project Name	Brookside	Square		Structure Number	F1		)
Damage to Tree Grate?  No  Damage to Tree Grate?  No  Ves  Ves  Waste  Mulch  Netting Replaced  No  Voups Bags  No  Ves  No  No  Ves  No  Ves  No  No  Ves  No  No  Ves  No  No  No  No  No  No  No  No  No  N	Plant Type (				Structure Size	6 x 4	ļ	)
Damage to Box Structure? No V Is Bypass Clear Yes V  Waste  Silt Clay Cups Bags Leaves Plant #1 #2  Plant height above grate Stem diameter/caliper Plant's Widest Width  No V Is Bypass Clear  Mulch Netting Replaced No V Stones Replaced No V Bags of Mulch Added  #1 #2  Plant Replaced No V	Initial Observa	itions						
Waste  Silt Clay  Cups Bags  Leaves  Buckets Removed  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  Metting Replaced  No  V  Stones Replaced  No  V  Bags of Mulch Added  #1 #2  Plant Replaced  No  V  Plant Replaced  No  V  Plant Replaced  No  V  Plant Replaced  No  V  V  Plant Replaced	Standing Water	in Bypass	No	■ Da	mage to Tree Grate?	No	▼	
Silt Clay  Cups Bags  Leaves  Buckets Removed  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  Ves  Ves  Ves  Ves  Ves  Ves  Ves  Ve	Damage to Box	Structure?	No	▼ Is	Bypass Clear	Yes	•	
Silt Clay  Cups Bags  Leaves  Buckets Removed  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  Ves  Ves  Ves  Ves  Ves  Ves  Ves  Ve								
Cups Bags Leaves Plant  #1  #2  Plant height above grate Stem diameter/caliper Plant's Widest Width  No  V Stones Replaced No  Bags of Mulch Added  #1  #2  Plant Replaced No  V Plant Replaced No  V Plant Replaced No  V Plant Replaced No  V V Plant Replaced No  V V V V V V V V V V V V V V V V V V	Waste				Mulch			
Leaves  Buckets Removed  #1 #2  Plant height above grate  T' 1"  Damage to Plant  No  Plant Replaced  No  Plant's Widest Width  Plant's Widest Width	Silt Clay	(	No	•	Netting Replaced	No	<b>▼</b>	
Buckets Removed  #1 #2 #1 #2  Plant height above grate 7' 1" Damage to Plant No  Stem diameter/caliper 1" Plant Replaced No  Plant's Widest Width 3' 5"	Cups Bags		No	•	Stones Replaced	No	<b>T</b>	
Plant #1 #2 #1 #2  Plant height above grate 7' 1" Damage to Plant No V  Stem diameter/caliper 1" Plant Replaced No V  Plant's Widest Width	Leaves		Yes	•	Bags of Mulch Added	3		
Plant height above grate  7' 1"  Damage to Plant  No  V  Stem diameter/caliper  Plant's Widest Width  Damage to Plant  No  V  Plant Replaced  No  V	Buckets Remove	ed	2					
Plant height above grate  7' 1"  Damage to Plant  No  V  Stem diameter/caliper  Plant's Widest Width  Damage to Plant  No  V  Plant Replaced  No  V								
Stem diameter/caliper    1"	Plant		#1	#2		#1	#2	
Plant's Widest Width  3' 5"	Plant height abo	ve grate	7' 1"		Damage to Plant	No		<b>▼</b>
Train's Widest Width	Stem diameter/c	caliper	1"		Plant Replaced	No		•
Plant Health Alive   Alive	Plant's Widest W	/idth	3' 5"					
	Plant Health		Alive ▼	•				



Project Name Brooksi	de Square		Structure Number	r F2		
Plant Type			Structure Size	6 x 4		
Initial Observations						
Standing Water in Bypa	ss No	<b>▼</b> Da	amage to Tree Grate?	No	•	
Damage to Box Structur	re? No	<b>▼</b> Is	Bypass Clear	Yes	▼	
Waste			Mulch			
Silt Clay	Yes	•	Netting Replaced	No	•	
Cups Bags	Yes	<b>▼</b>	Stones Replaced	No	▼	
Leaves	Yes	•	Bags of Mulch Added	3		
Buckets Removed	2					
Plant	#1	#2		#1	#2	
Plant height above grate	e 7' 10"		Damage to Plant	No ▼		
Stem diameter/caliper	1.5"		Plant Replaced	No ▼		
Plant's Widest Width	3' 4"					
Plant Health	Alive ▼	•				



Project Name Brookside	e Square		Structure Number	F3
Plant Type			Structure Size	6 x 4
Initial Observations				
Standing Water in Bypass	No	<b>▼</b> Da	nmage to Tree Grate?	No ▼
Damage to Box Structure	? No	<b>▼</b> Is	Bypass Clear	Yes ▼
Waste			Mulch	
Silt Clay	No	•	Netting Replaced	No ▼
Cups Bags	No	•	Stones Replaced	<b>v</b>
Leaves	Yes	•	Bags of Mulch Added	3
Buckets Removed	2			
Plant	#1	#2		#1 #2
Plant height above grate	7′ 8″		Damage to Plant	No V
Stem diameter/caliper	1.5"		Plant Replaced	No v
Plant's Widest Width	3' 4"			
Plant Health	Alive	•		



Project Name Brookside	e Square		Structure Number	F4
Plant Type			Structure Size	6 x 4
Initial Observations				
Standing Water in Bypass	No	■ Da	mage to Tree Grate?	No ▼
Damage to Box Structure	? No	▼ Is	Bypass Clear	Yes ▼
Waste			Mulch	
Silt Clay	No	<b>V</b>	Netting Replaced	No ▼
Cups Bags	No	•	Stones Replaced	No ▼
Leaves	Yes	•	Bags of Mulch Added	3
Buckets Removed	2			
Plant	#1	#2		#1 #2
Plant height above grate	7"		Damage to Plant	No V
Stem diameter/caliper	1.5"		Plant Replaced	No 🔻
Plant's Widest Width	3' 4"			
Plant Health	Alive ▼	<b>T</b>		

### 5-24-16 - Brookside Square - Filterra Maintenance



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DSCF8676

## 5-24-16 - Brookside Square - Filterra Maintenance









DSCF8677

DSCF8678

DSCF8679 DSCF8680





DSCF8681

DSCF8682



#### **Brookside Square - Filterra - Inspection & Maintenance**

### **Project Information** 12/07/2016 Date of Maintenance Filterra Units on this Order Total Units on this Project 4 10 **Arrival Time** Departure Time 2 Number of Workers 2 Notes on Project **Activation Supervisor** Brian Mulcahy



Damage to Tree Grate?  No  Damage to Tree Grate?  No  V  Is Bypass Clear  Ves  Ves  Waste  Mulch  Netting Replaced  No  V  Stones Replaced  No  V  Bags of Mulch Added  Plant  #1  #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  V  Damage to Tree Grate?  No  V  Is Bypass Clear  Yes  V  Stones Replaced  No  V  Damage to Plant  Plant Replaced  No  V  V  Plant Replaced	Project Name Brooksi	de Square			Structure Number		1		
Damage to Tree Grate?  No  Damage to Tree Grate?  No  Is Bypass Clear  Waste  Mulch  Netting Replaced  No  V  Stones Replaced  No  Plant  #1  #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  Plant Replaced  No  Plant Replaced	Plant Type				Structure Size		6x4		
Damage to Box Structure? No	Initial Observations								
Waste  Silt Clay  Cups Bags  Leaves  Buckets Removed  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  Mulch  Netting Replaced  No   Stones Replaced  No  Plant #1 #2  #1 #2  Damage to Plant  No  Plant Replaced	Standing Water in Bypas	SS No	•	Dam	age to Tree Grate?	No	-		
Silt Clay  Cups Bags  Leaves  Buckets Removed  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  V  Stones Replaced  No  V  Stones Replaced  No  V  Bags of Mulch Added  #1 #2  Damage to Plant  No  V  Plant Replaced  No  V  Plant Replaced  No  V  Plant Replaced  No  V  Plant Replaced  No  V  V  Plant Replaced  No  V  Plant Replaced  No  V  V  Plant's Widest Width	Damage to Box Structur	re? No	•	Is By	ypass Clear	Yes	•		
Silt Clay  Cups Bags  Leaves  Buckets Removed  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  V  Stones Replaced  No  V  Stones Replaced  No  V  Bags of Mulch Added  #1 #2  Damage to Plant  No  V  Plant Replaced  No  V  Plant Replaced  No  V  Plant Replaced  No  V  Plant Replaced  No  V  V  Plant Replaced  No  V  Plant Replaced  No  V  V  Plant's Widest Width									
Cups Bags Leaves Yes  Buckets Removed  #1 #2  Plant height above grate  Stones Replaced No  Wo  Stones Replaced No  Bags of Mulch Added  #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  No  Plant Replaced	Waste				Mulch				
Leaves  Buckets Removed  #1 #2  Plant #1 #2  Plant height above grate  Stem diameter/caliper  Plant's Widest Width  Plant's Widest Width	Silt Clay	No	<b>▼</b>		Netting Replaced	No			
Buckets Removed  #1 #2 #1 #2  Plant height above grate 7'6"  Stem diameter/caliper 1.5"  Plant Replaced No  Plant Replaced No  Plant's Widest Width	Cups Bags	No	•		Stones Replaced	No		•	
Plant #1 #2 #1 #2  Plant height above grate 7'6" Damage to Plant No ▼  Stem diameter/caliper 1.5" Plant Replaced No ▼  Plant's Widest Width 3'9"	Leaves	Yes	<b>V</b>		Bags of Mulch Added	4			
Plant height above grate 7'6" Damage to Plant No ▼  Stem diameter/caliper 1.5" Plant Replaced No ▼  Plant's Widest Width	Buckets Removed	4							
Plant height above grate 7'6" Damage to Plant No ▼  Stem diameter/caliper 1.5" Plant Replaced No ▼  Plant's Widest Width									
Stem diameter/caliper  1.5"  Plant Replaced  No  Plant's Widest Width	Plant	#1	#2				#1	#2	
Plant's Widest Width  3'9"	Plant height above grate	7'6"			Damage to Plant	No	<b>T</b>		•
Tiunes Widest Width	Stem diameter/caliper	1.5"			Plant Replaced	No	<b>V</b>		•
Plant Health Alive   Alive	Plant's Widest Width	3′9″							
	Plant Health	Alive ▼		•					



Project Name Brookside	e Square		Structure Number	2		
Plant Type			Structure Size	6x4		
Initial Observations						
Standing Water in Bypass	No	▼ Dan	nage to Tree Grate?	No	•	
Damage to Box Structure?	? No	▼ Is E	Bypass Clear	Yes	•	
Waste			Mulch			
Silt Clay	No	•	Netting Replaced	No	•	
Cups Bags	No	•	Stones Replaced	No	•	
Leaves	Yes	•	Bags of Mulch Added	4		
Buckets Removed	4					
Plant	#1	#2		#1	#2	
Plant height above grate	7′10″		Damage to Plant	No ▼	•	
Stem diameter/caliper	1.5"		Plant Replaced	No ▼	•	
Plant's Widest Width	3′2″					
Plant Health	Alive ▼	•				



Project Name Brooks	ide Square	Structure Numbe	r (3
Plant Type		Structure Size	6x4
Initial Observations			
Standing Water in Bypa	ass No ▼	Damage to Tree Grate?	No ▼
Damage to Box Structu	re? No ▼	Is Bypass Clear	No ▼
Waste		Mulch	
Silt Clay	No ▼	Netting Replaced	No ▼
Cups Bags	No 🔻	Stones Replaced	No ▼
Leaves	Yes ▼	Bags of Mulch Added	4
Buckets Removed	4		
Plant	#1 #2		#1 #2
Plant height above grat	e [7'8"	Damage to Plant	No V
Stem diameter/caliper	1.75"	Plant Replaced	No V
Plant's Widest Width	3'3"		
Plant Health	Alive ▼	•	



Project Name Brookside	e Square		Structure Number	4	
Plant Type			Structure Size	6x4	
Initial Observations					
Standing Water in Bypass	No	■ Dam	age to Tree Grate?	No	•
Damage to Box Structure	? No	▼ Is B	ypass Clear	Yes	•
Waste			Mulch		
Silt Clay	No ▼		Netting Replaced	No	▼
Cups Bags	No ▼		Stones Replaced	No	•
Leaves	Yes ▼		Bags of Mulch Added	4	
Buckets Removed	4				
Plant	#1	#2		#1	#2
Plant height above grate	7′2″		Damage to Plant	No ▼	V
Stem diameter/caliper	1.5"		Plant Replaced	No 🔻	
Plant's Widest Width	2′11″				
Plant Health	Alive ▼ (	•			

### **Concord Filterra**



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DSCF3373



DSCF3374



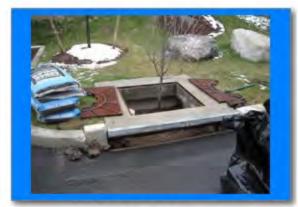
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# **Concord Filterra**









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