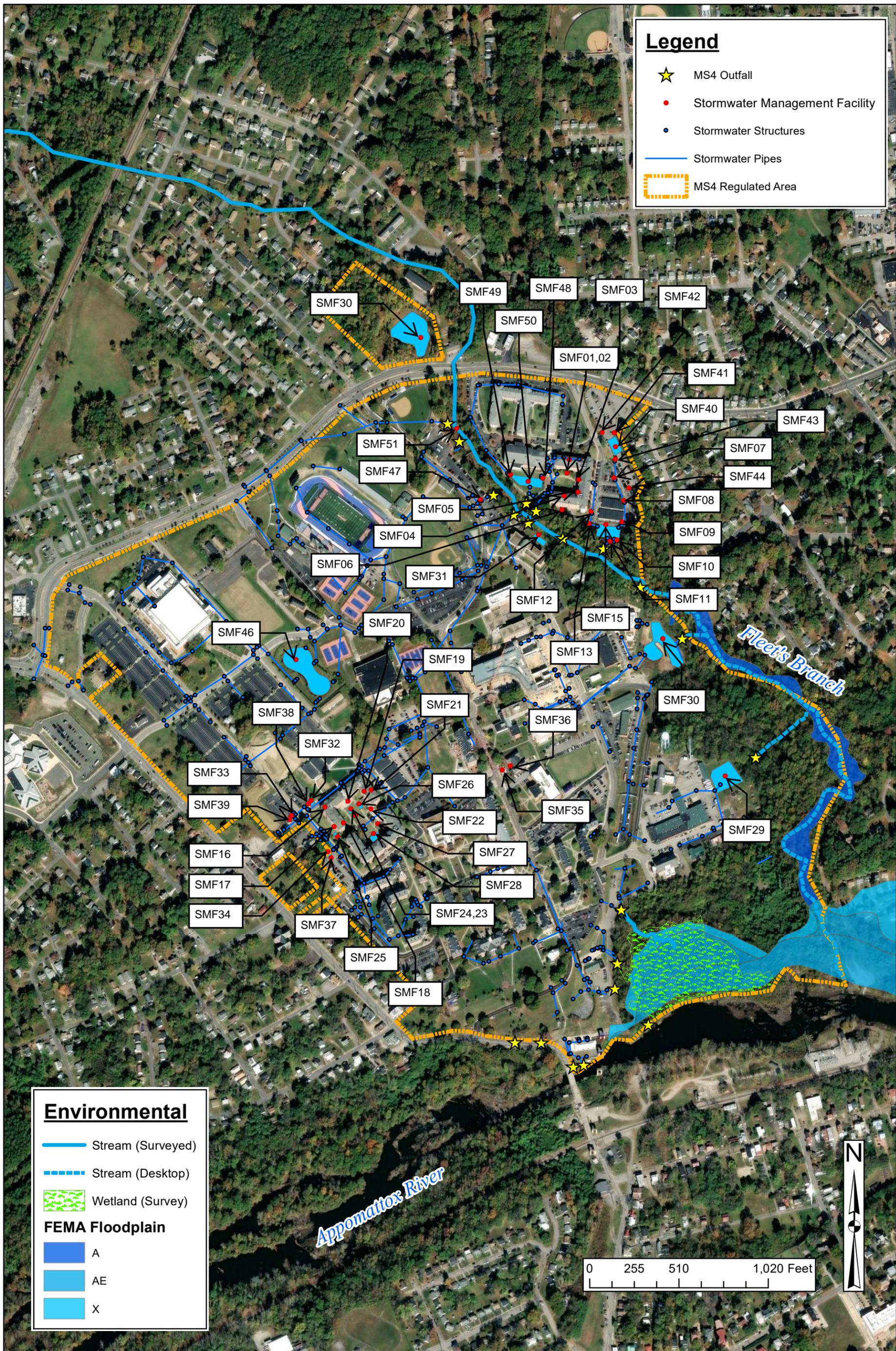


Appendix F

MCM 5 Resources



Virginia State University
MS4 Map
April 2025



Stormwater Management Facilities

ID	Type	Location	Latitude	Longitude	Total Acres Treated	Pervious Acres Treated	Impervious Acres Treated	Date Brought Online	6th Order HUC	Owner	Operator	Part of TMDL Action Plan?	Maintenance Aggrement?
01	Filtrerra (Roof Inlet)	Gateway II Dorm Building	37.242304	-77.417352	0.07	0.0	0.07	06/2011	JA40	VSU	VSU	No	NA
02	Filtrerra (Roof Inlet)	Gateway II Dorm Building	37.242166	-77.417371	0.04	0.0	0.04	06/2011	JA40	VSU	VSU	No	NA
03	Filtrerra (Roof Inlet)	Gateway II Dorm Building	37.242007	-77.417094	0.07	0.0	0.07	06/2011	JA40	VSU	VSU	No	NA
04	Filtrerra (Roof Inlet)	Gateway II Dorm Building	37.241731	-77.417437	0.11	0.0	0.11	06/2011	JA40	VSU	VSU	No	NA
05	Filtrerra (Roof Inlet)	Gateway II Dorm Building	37.241792	-77.417129	0.05	0.0	0.05	06/2011	JA40	VSU	VSU	No	NA
06	Filtrerra (Roof Inlet)	Gateway II Dorm Building	37.241562	-77.417472	0.07	0.0	0.07	06/2011	JA40	VSU	VSU	No	NA
07	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.242022	-77.416447	0.22	0.04	0.18	06/2011	JA40	VSU	VSU	No	NA
08	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.241666	-77.416268	0.38	0.03	0.35	06/2011	JA40	VSU	VSU	No	NA
09	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.241321	-77.416303	0.40	0.02	0.38	06/2011	JA40	VSU	VSU	No	NA
10	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.241038	-77.416410	0.34	0.03	0.31	06/2011	JA40	VSU	VSU	No	NA
11	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.241020	-77.416548	0.35	0.02	0.33	06/2011	JA40	VSU	VSU	No	NA
12	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.241493	-77.416913	0.23	0.03	0.20	06/2011	JA40	VSU	VSU	No	NA
13	Filtrerra (Curb Inlet)	Gateway II Dorm Parking Lot #30M	37.241327	-77.416974	0.18	0.06	0.12	06/2011	JA40	VSU	VSU	No	NA
15	Underground Storage Vault	Gateway II Dorm Parking Lot #30M	37.241286	-77.416623	NA	NA	NA	06/2011	JA40	VSU	VSU	No	NA
16	Filtrerra (Roof Inlet)	Howard Hall Quad II Building	37.236886	-77.422202	0.5	0.0	0.5	01/2012	JA40	VSU	VSU	No	NA
17	Filtrerra (Roof Inlet)	Howard Hall Quad II Building	37.236580	-77.422026	0.5	0.0	0.5	01/2012	JA40	VSU	VSU	No	NA
18	Filtrerra (Roof Inlet)	Howard Hall Quad II Building	37.236638	-77.421840	0.12	0.0	0.12	01/2012	JA40	VSU	VSU	No	NA
19	Filtrerra (Roof Inlet)	Howard Hall Quad II Building	37.237131	-77.421430	0.09	0.0	0.09	01/2012	JA40	VSU	VSU	No	NA
20	Filtrerra (Roof Inlet)	Howard Hall Quad II Building	37.236981	-77.421743	0.08	0.0	0.08	01/2012	JA40	VSU	VSU	No	NA
21	Filtrerra (Roof Inlet)	Howard Hall Quad II Building	37.237152	-77.421285	0.27	0.01	0.26	01/2012	JA40	VSU	VSU	No	NA
22	Contech Stormfilter	Howard Hall Quad II Courtyard	37.236854	-77.421296	0.14	0.02	0.12	01/2012	JA40	VSU	VSU	No	NA
23	Contech Stormfilter	Howard Hall Quad II Courtyard	37.236752	-77.421605	0.46	0.05	0.39	01/2012	JA40	VSU	VSU	No	NA
24	Underground Irrigation Storage (50,000 Gallons)	Howard Hall Quad II Courtyard	37.236860	-77.421690	NA	NA	NA	01/2012	JA40	VSU	VSU	No	NA
25	Underground CMP Detention	West Yard of Howard Hall Quad II	37.236424	-77.421959	NA	NA	NA	01/2012	JA40	VSU	VSU	No	NA
26	Underground CMP Detention	Howard Hall Quad II Courtyard	37.236933	-77.421531	NA	NA	NA	01/2012	JA40	VSU	VSU	No	NA
27	Underground Detention Chamber w/ Sand Filters	Howard Hall Quad I Courtyard	37.236619	-77.421166	1.90	1.07	0.83	04/2011	JA40	VSU	VSU	No	NA
28	Underground Irrigation Storage Vault	Howard Hall Quad I	37.236466	-77.421249	0.00	0.00	0.00	04/2011	JA40	VSU	VSU	No	NA
29	Extended Detention Basin	Physical Plant Building	37.237497	-77.414375	5.49	0.97	4.52	03/1994	JA40	VSU	VSU	No	NA
30	Retention Basin Type III	Behind Jesse R. Bolling (ROTC Building)	37.239482	-77.415527	21.07	9.22	11.85	03/2002	JA40	VSU	VSU	No	NA
31	Deleware Sand Filter	Cooperative Extension Agriculture/Wilder Building	37.241139	-77.417943	1.17	0.32	0.85	05/1994	JA40	VSU	VSU	No	NA
32	Sorbtive Filter 2C	Boisseau St. Parking Lot # 36	37.236994	-77.422473	0.38	0.01	0.37	04/2011	JA40	VSU	VSU	No	NA
33	Sorbtive Filter 1C	Boisseau St. Parking Lot #37	37.236761	-77.422861	0.39	0.03	0.36	04/2011	JA40	VSU	VSU	No	NA
34	Sorbtive Filter 10C	Lee St. Parking Lot #21	37.236190	-77.422153	0.44	0.02	0.42	04/2011	JA40	VSU	VSU	No	NA
35	Contech Stormfilter	University Bookstore	37.237440	-77.418709	0.10	.01	.09	04/2014	JA40	VSU	VSU	No	NA
36	Underground Storage Vault	University Bookstore	37.237507	-77.418556	NA	NA	NA	04/2014	JA40	VSU	VSU	No	NA
37	Underground Storage Vault	Lee St. Parking Lot #21	37.236097	-77.422090	NA	NA	NA	04/2011	JA40	VSU	VSU	No	NA
38	Underground Storage Vault	Boisseau St. Parking Lot #36	37.236943	-77.422522	NA	NA	NA	04/2011	JA40	VSU	VSU	No	NA
39	Underground Storage Vault	Boisseau St. Parkign Lot #37	37.236699	-77.422896	NA	NA	NA	04/2011	JA40	VSU	VSU	No	NA
40	Underground Storage Vault	Dupuy Avenue Parking Lot	37.242507	-77.416410	NA	NA	NA	01/04/2016	JA40	VSU	VSU	No	NA
41	Filtrerra (Curb Inlet)	Dupuy Avenue Parking Lot	37.242727	-77.416434	0.53	0.08	0.45	01/04/2016	JA40	VSU	VSU	No	NA
42	Filtrerra (Curb Inlet)	Dupuy Avenue Parking Lot	37.242737	-77.416673	0.47	0.15	0.32	01/04/2016	JA40	VSU	VSU	No	NA
43	Filtrerra (Curb Inlet)	Dupuy Avenue Parking Lot	37.242310	-77.416422	0.47	0.03	0.44	01/04/2016	JA40	VSU	VSU	No	NA
44	Filtrerra (Curb Inlet)	Dupuy Avenue Parking Lot	37.241859	-77.416157	0.28	0.04	0.24	01/04/2016	JA40	VSU	VSU	No	NA
45	Extended Detention Pond	North side of River Rd., next to Fleets Branch	37.244275	-77.420233	12.30			06/01/2016	JA40	VSU	VDOT	No	NA
46	Extended Detention Pond	Next to Multi Purpose Center, along 3rd Ave.	37.239210	-77.422700	32.00	11.56	20.44	06/01/2016	JA40	VSU	VSU	No	NA
47	Contech Stormfilter	College Ave. Parking Lot #28	37.241705	-77.419085	2.59	1.52	1.07	06/01/2016	JA40	VSU	VSU	No	NA
48	Contech Stormfilter	Dining & Events Center	37.242029	-77.417852	2.48	0.91	1.57	06/01/2016	JA40	VSU	VSU	No	NA
49	Contech Stormfilter	Dining & Events Center	37.242093	-77.418481	4.45	1.66	2.79	06/01/2016	JA40	VSU	VSU	No	NA
50	Contech Underground Storage Vault	Dining & Events Center	37.241974	-77.418139	NA	NA	NA	06/01/2016	JA40	VSU	VSU	No	NA
51	Fleets Branch Stream Restoration Phase1	Fleets Branch	37.242590	-77.419278	477.55	NA	148.91	09/18/2020	JA40	VSU	VSU	Yes	NA

Virginia State University

BMP Inspection & Maintenance Checklists



TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.



Detention, Retention, & Impoundment BMPs

Inspection & Maintenance Checklist

Inspector Name:			Type of BMP:	
BMP ID #:			Date/Time:	
Component	Yes	No	N/A	Comments
I. Embankment				
A. Top				
1. Visual settlement				
2. Misalignment				
3. Cracking				
B. Upstream Slope				
1. Erosion				
2. Adequate groundcover				
3. Trees, shrubs, or other vegetation				
4. Cracks, settlements, or bulges				
5. Rodent holes				
C. Downstream Slope				
1. Erosion				
2. Adequate groundcover				
3. Trees, shrubs, or other vegetation				
4. Cracks, settlements, or bulges				
5. Rodent holes				
E. Drainage/seepage control				
1. Internal drains flowing				
2. Seepage at toe				
II. Emergency Spillway				
1. Eroding or backcutting				
2. Obstruction				
3. Leaking				
4. Operational				



BMP ID #:			Date/Time:	
Component	Yes	No	N/A	Comments
III. Principal Spillway Barrel				
1. Seepage into pipe				
2. Debris present				
3. Displaced or offset joints				
IV. Outlet Protection/Stilling Basin				
1. Obstruction				
2. Adequate riprap				
3. Undercutting at the outlet				
4. Outlet channel scour				
V. Internal Basin Area				
A. Low Flow Channel*				
1. Erosion				
2. Adequate vegetation				
3. Obstruction				
B. Basin Bottom & Side Slopes				
1. Erosion				
2. Adequate stabilization				
3. Sediment accumulation				
4. Floating debris				
5. High water marks				
6. Shoreline protection				
C. Inflow Channels/Pipes				
1. Erosion				
2. Adequate stabilization				
3. Undercutting				
4. Obstruction				
D. Sediment Forebay				
1. Sediment accumulation				
2. Stable overflow into basin				
E. Upland Landscaping				
F. Aquatic Landscaping				

*Only applies to Extended Detention Facilities



BMP ID #:		Date/Time:		
Component	Yes	No	N/A	Comments
Notes:				



BMP ID #:	Date/Time:
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Notes:



Intermittent Sand Filter

Inspection & Maintenance Checklist

Inspector Name:			Type of BMP:		
BMP ID #:			Date/Time:		
Component	Yes	No	N/A	Comments	
I. Debris Cleanout					
A. Contributing areas clean of debris					
B. Filtration Facility clean of debris					
C. Inlets and outlets clear of debris					
II. Vegetation in Contributing Drainage Area					
A. Stabilized					
B. Active evidence of erosion					
C. Area mowed and clippings removed					
III. Oil & Grease					
A. Evidence of filter surface clogging					
B. Activities in drainage area to minimize oil & grease entry					
IV. Water retention where required					
A. Water holding chambers at normal pool					
B. Evidence of leakage					
V. Sediment Deposition					
A. Filtration chambers clean of sediment					
B. Water chambers not more than ½ full of sediment					
VI. Structural Components					
A. Evidence of structural deterioration					
B. Grates are in good condition					
C. Evidence of spalling or cracking of structural parts					



BMP ID #:			Date/Time:	
Component	Yes	No	N/A	Comments
VII. Outlets/Overflow Spillway				
A. Obstruction				
B. Adequate riprap (If applicable)				
C. Undercutting at the outlet				
D. Outlet channel scour				
VIII. Overall Function of Facility				
A. Evidence of flow				
B. Noticeable odors				

Notes:



Sorbitive Filter BMP

Inspection & Maintenance Checklist

Inspector Name:				Type of BMP:		
BMP ID #:				Date/Time:		
				Maintenance required?		
Component:	Yes	No	Conditions When Maintenance is Needed	Yes	No	Comments:
The access manhole or access doors are functioning properly and are structurally sound						
Sediment and oil are present (provide depths)						
Floatable pollutant accumulation is present in the Pre-treatment Bay						
The Cartridge Bay is visually inspected for sediment depth (provide depth)*(If sediment depth is greater than 6 inches, maintenance is required						
Proper draindown is occurring in the Cartridge Bay *(If at least 40 hours of dry weather have elapsed, since the most recent runoff event and the Bay contains more than 3 inches of water above the sediment layer, the Sorbtive BRICKs required cleaning or replacement						
The internal components show no signs of damage						



BMP ID #:	Date/Time:
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Notes:



StormFilter BMP
Inspection & Maintenance Checklist

Inspector Name:				Type of BMP:		
BMP ID #:				Date/Time:		
				Maintenance required?		
Component:	Yes	No	Conditions When Maintenance is Needed	Yes	No	Comments:
I. Below Ground Vault						
Sediment accumulation top of cartridge			Sediment depth exceeds 0.25 inches			
Sediment accumulation in vault			Sediment depth exceeds 4 inches in the first chamber			
Submerged cartridges			More than 4" of static water in the cartridge bay 24 hours after last rainfall event			
Trash/debris accumulation			Trash and debris accumulated on compost filter bed			
Sediment in drain pipes or cleanouts			Drain pipes and/or clean outs are full of sediment and/or debris			
Damaged pipes			Any part of any pipe crushed or damaged due to corrosion and/or settlement			
Access cover damaged/not working			Cover cannot be opened; one person cannot open the cover using normal lifting pressure; corrosion/deformation of cover			
Vault structure includes cracks in wall or bottom; damage to the frame and/or top slab			Cracks wider than ½ inch or evidence of soil particles entering the structure through cracks; determination that the vault is not structurally sound			
			Cracks wider than ½ inch at the joint of any inlet/outlet pipe or evidence of soil particles entering through the cracks			
Baffles			Baffles corroding, cracking, warping, and/or showing signs of failure			
Access ladder damaged			Ladder is corroded or deteriorated, not functioning properly, not securely secured to the structure wall and/or missing rungs; cracks; misalignment			



BMP ID #:				Date/Time:		
				Maintenance required?		
Component:	Yes	No	Conditions When Maintenance is Needed	Yes	No	Comments:
II. Below Ground Cartridge Type						
Filter Media			Drawdown of water through the media takes longer than one hour and/or overflow occurs frequently			
Short Circuiting			Flows do not properly enter filter cartridges			

Notes:



Underground Detention Systems (Water Quantity)

Inspection & Maintenance Checklist

Inspector Name:			Type of BMP:
BMP ID #:			Date/Time:
Inspection Finding	Y/N	Maintenance Required Y/N	Comments
I. Internal Storage Area			
A. Sediment present?			
B. Trash/debris present?			
C. Separation of joints, cracks, breaks, or deterioration of structure?			
D. Algal growth present?			
E. Evidence of seepage, leakage, or rust?			
F. Evidence of pollutants?			
Inlet & Outlet Piping			
A. Inspection manhole functioning properly?			
B. Clogging of inflow pipes?			



BMP ID #:			Date/Time:
Inspection Finding	Y/N	Maintenance Required Y/N	Comments
C. Clogging of outflow pipes?			
D. Obstruction?			
E. Adequate riprap (If applicable)?			
F. Undercutting at the outlet?			
G. Outlet channel scour?			

Notes: