CITY OF SOUTH PORTLAND

STORMWATER TREATMENT SYSTEM

MAINTENANCE MANUAL

March 2021

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MANUAL OVERVIEW

This manual was developed to assist municipal staff – primarily from the Water Resource Protection and Parks & Recreation Departments – in providing ongoing maintenance services for the City's numerous structural stormwater treatment systems (Figure 1). These systems represent a significant investment and must be maintained in perpetuity to ensure proper functioning for stormwater pollutant removal and flow control as required by the State's Stormwater General Permit and City's Stormwater Performance Standards.

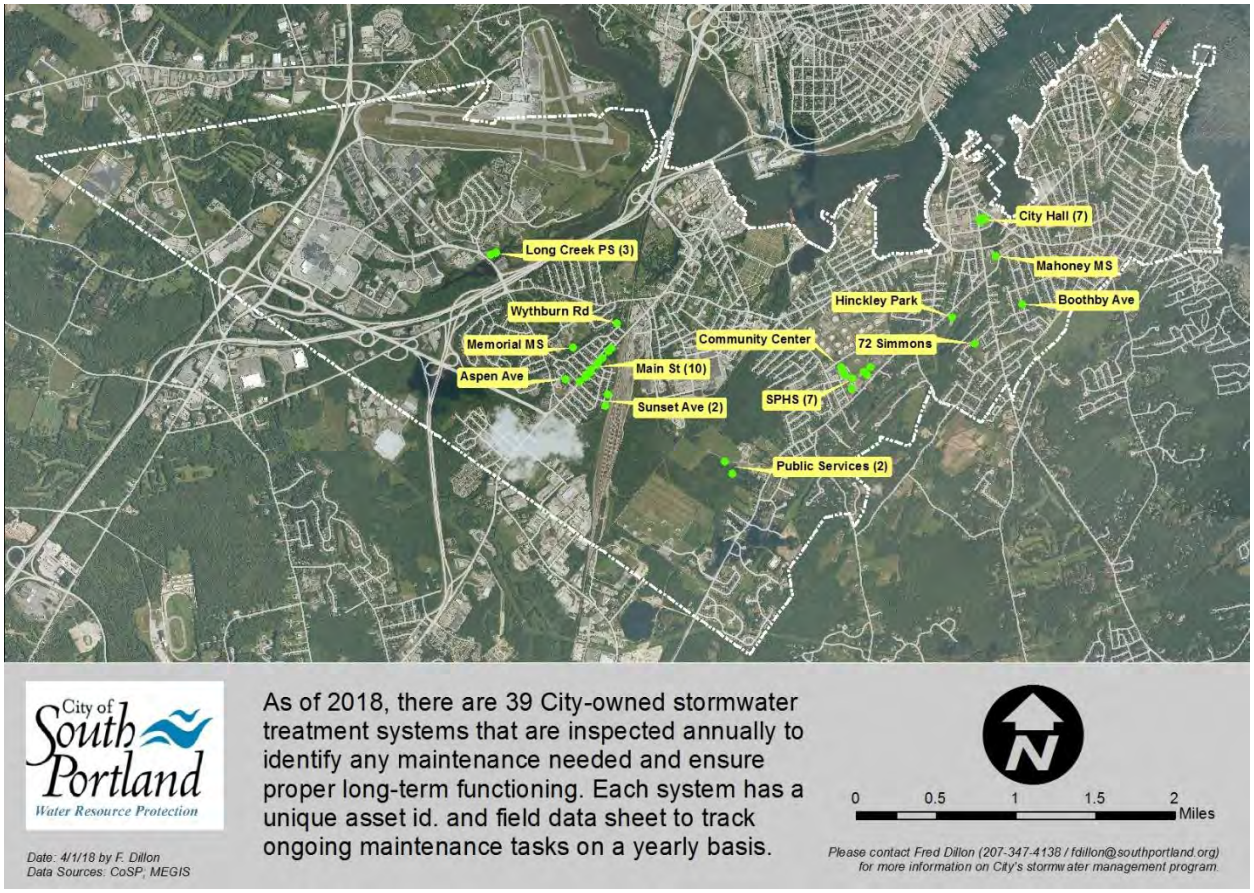


Figure 1: *City-owned stormwater treatment systems requiring annual ongoing maintenance* ***(MAP LINK HERE)***

Each stormwater treatment system has been assigned a unique identifier based on watershed location (and consistent with identifiers for other City-owned stormwater infrastructure). Additionally, every system has an accompanying maintenance form that includes a brief description of the system type, a maintenance task checklist, a location map and photo of the system, and generic diagrams for the system. Specific maintenance tasks will be determined from annual third party inspection report recommendations and will be assigned to each municipal department (P&R and WRP) based on whether these activities occur above ground or below ground. In general, most above ground tasks have been assigned to P&R (i.e., landscaping) while most hardscaping and below ground tasks have been assigned to WRP (i.e., rip rap repair/replacement, line and catch basin cleaning, etc.).

Initially, maintenance forms can be completed in either paper or electronic formats through the use of Google Forms. However, all record-keeping and reporting will eventually be done with an Arc GIS Online (AGOL) application or the City's Asset Management System application (VUEWorks).

BIORETENTION SYSTEMS

BIORETENTION CELL MAINTENANCE FORM
AC-BMP-3: South Portland High School

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

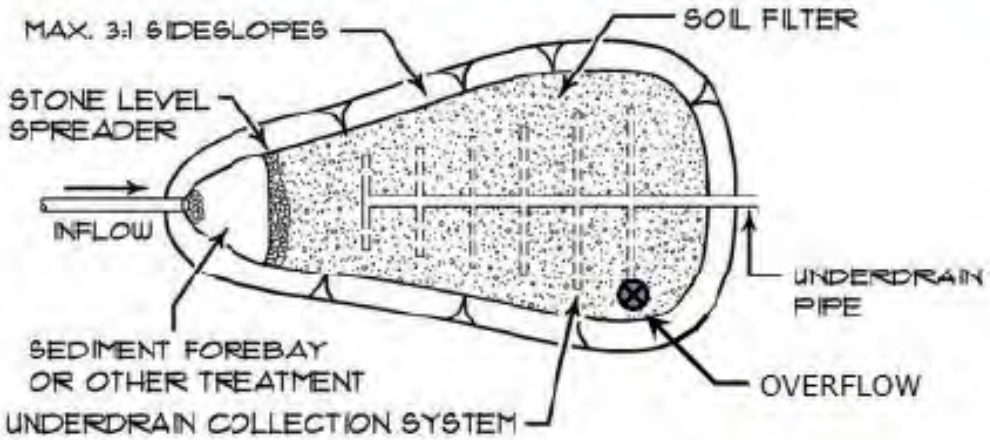
ADDITIONAL COMMENTS:

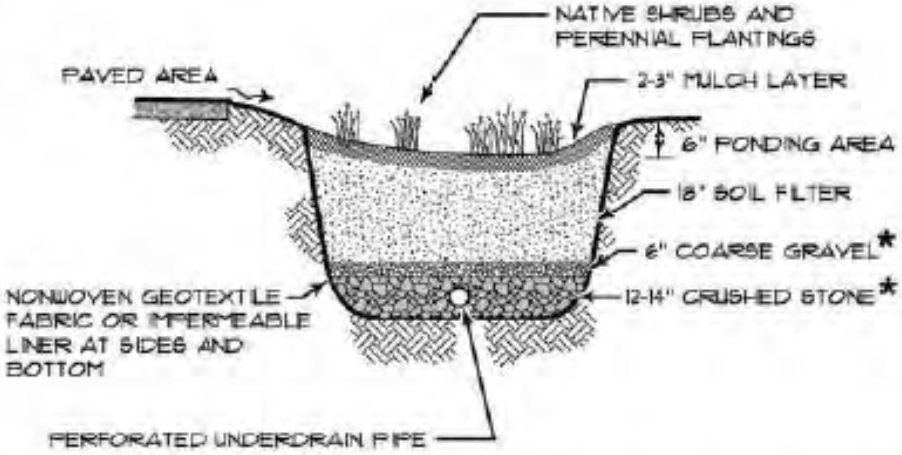
Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

AC-BMP-3 Maintenance Form Ver1.pub

BIORETENTION CELL MAINTENANCE FORM
AC-BMP-3: South Portland High School

AC-BMP-3: SPHS Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

AC-BMP-3 Maintenance Form Ver1.pub

BIORETENTION CELL MAINTENANCE FORM
AC-BMP-4: South Portland High School

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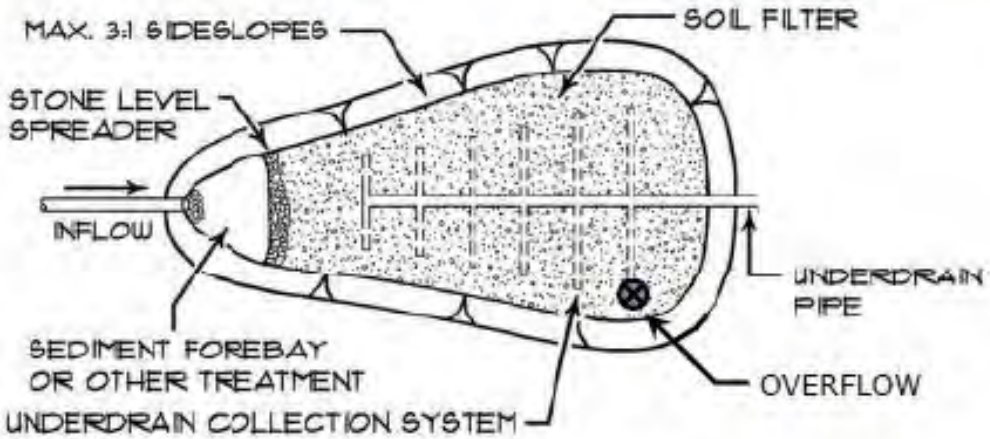
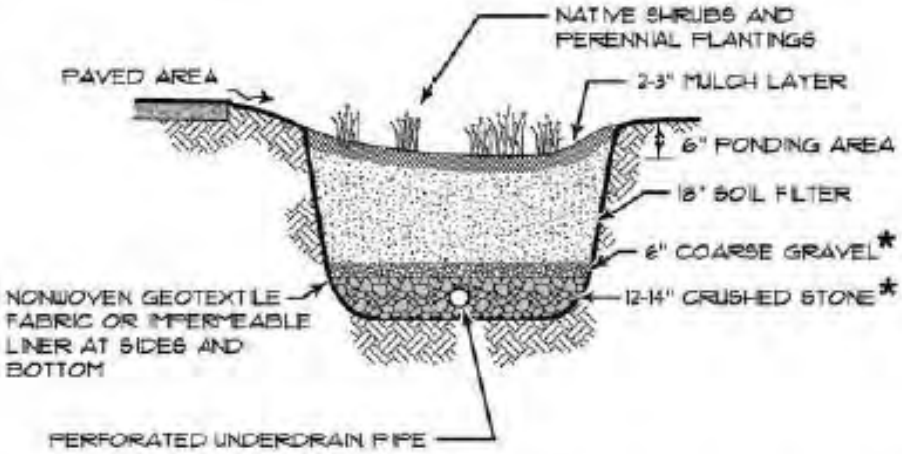
BIORETENTION CELL MAINTENANCE FORM
AC-BMP-4: South Portland High School


AC-BMP-4: SPHS Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-3: Aspen Avenue

City of South Portland
Water Resource Protection

OVERVIEW

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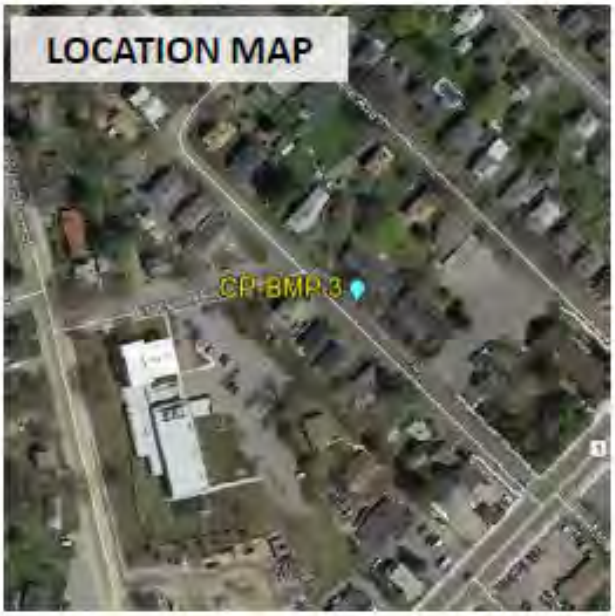
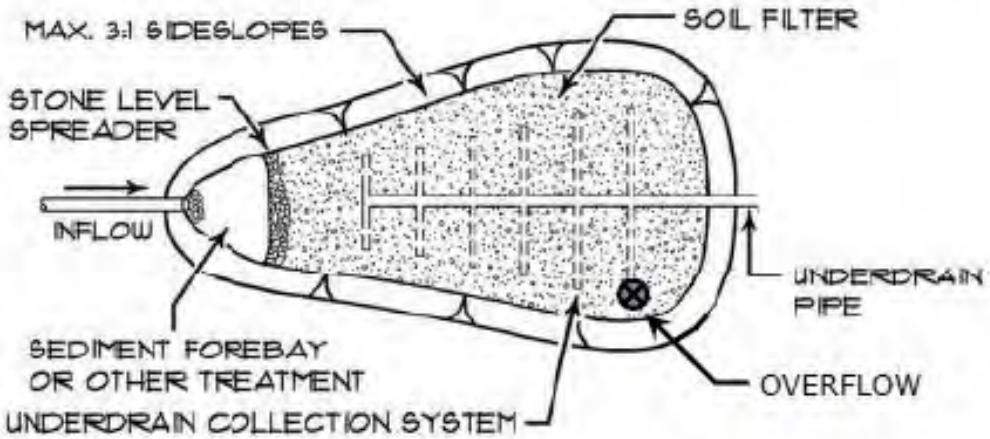
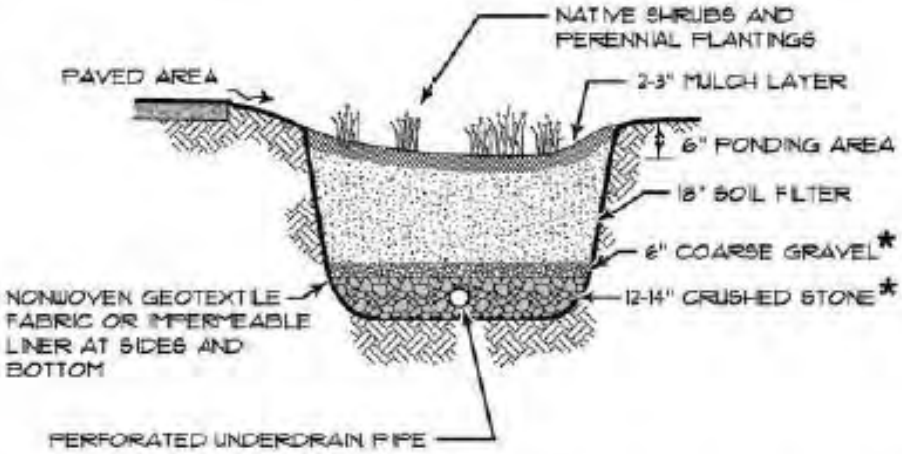


CP-BMP-3: Aspen Ave. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-4: 609 Main Street

City of South Portland
Water Resource Protection

OVERVIEW

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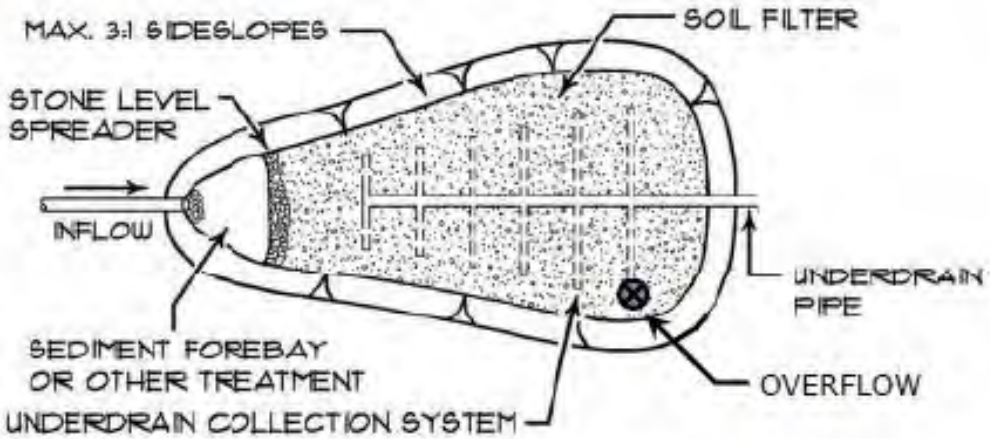
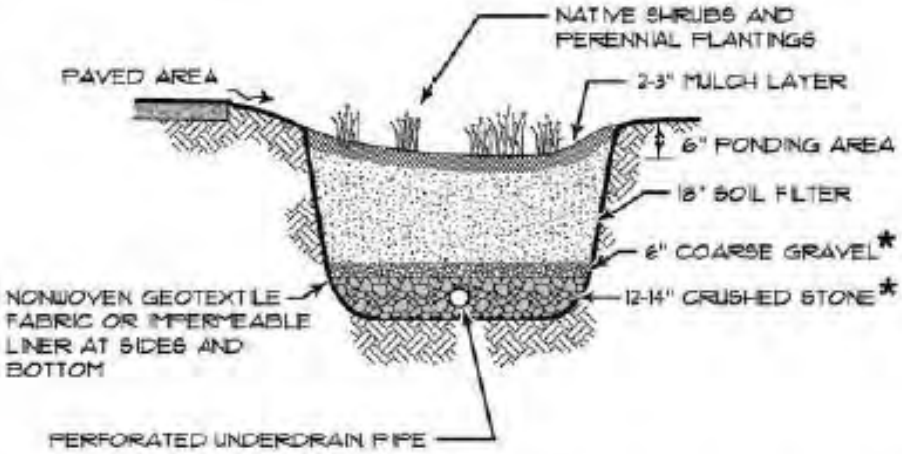
BIORETENTION CELL MAINTENANCE FORM
CP-BMP-4: 609 Main Street

CP-BMP-4: 609 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-5: 576 Main Street

City of South Portland
Water Resource Protection

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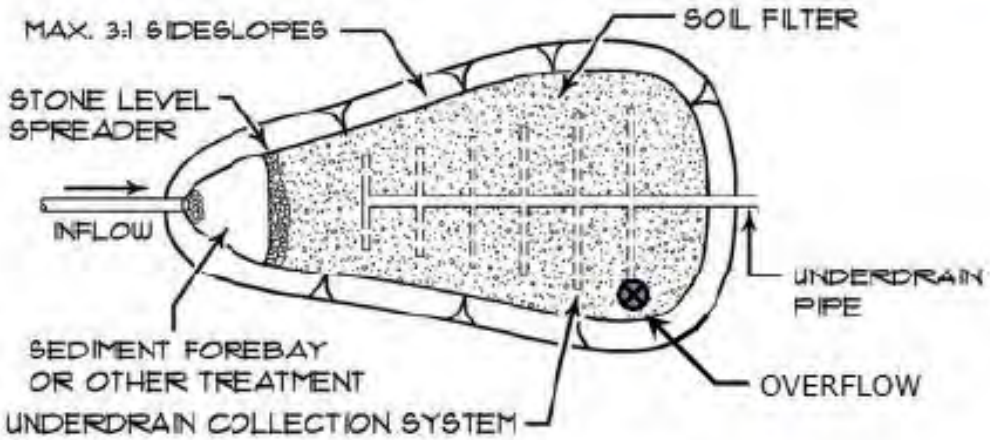
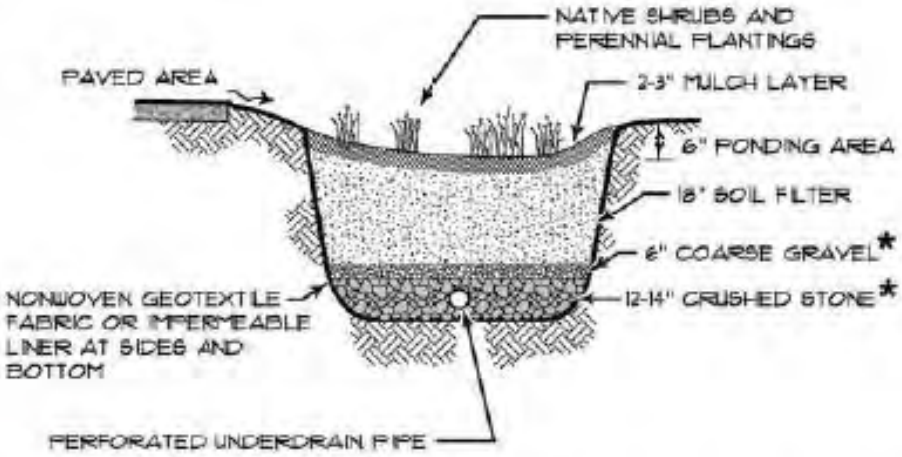
BIORETENTION CELL MAINTENANCE FORM
CP-BMP-5: 576 Main Street

CP-BMP-5: 576 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-6: 581 Main Street

City of South Portland
Water Resource Protection

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			Properly dispose of any sediment removed	√	√

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MATERIALS USED:

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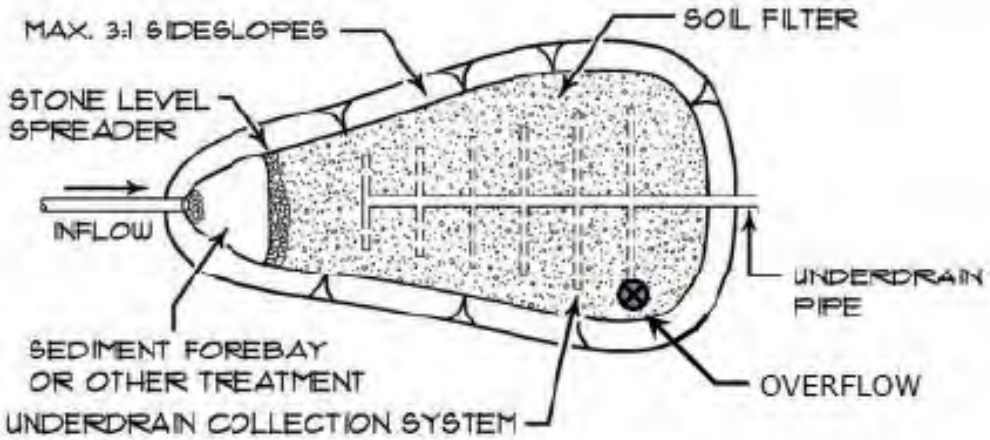
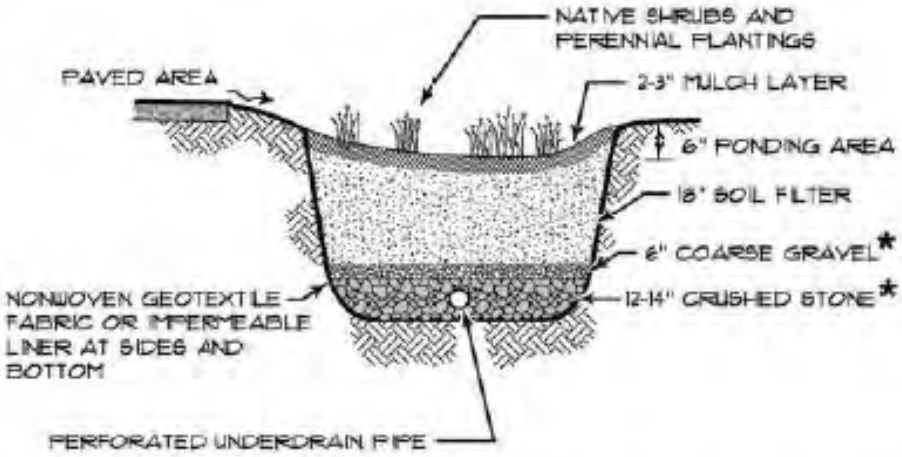
BIORETENTION CELL MAINTENANCE FORM
CP-BMP-6: 581 Main Street

CP-BMP-6: 581 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-7: 562 Main Street

City of South Portland
Water Resource Protection

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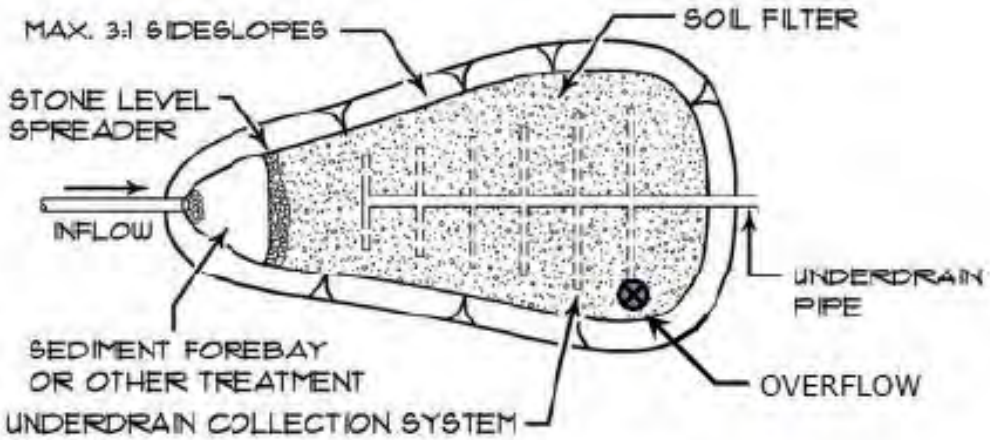
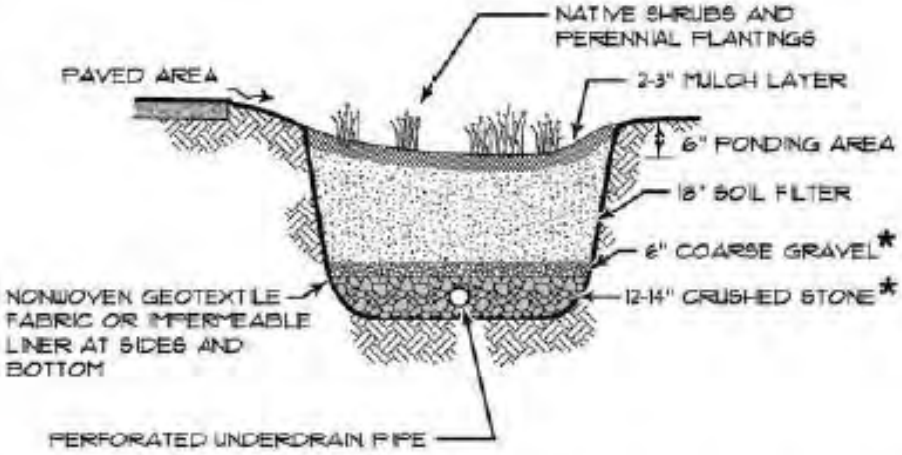
BIORETENTION CELL MAINTENANCE FORM
CP-BMP-7: 562 Main Street

CP-BMP-7: 562 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-8: 557 Main Street

City of South Portland
Water Resource Protection

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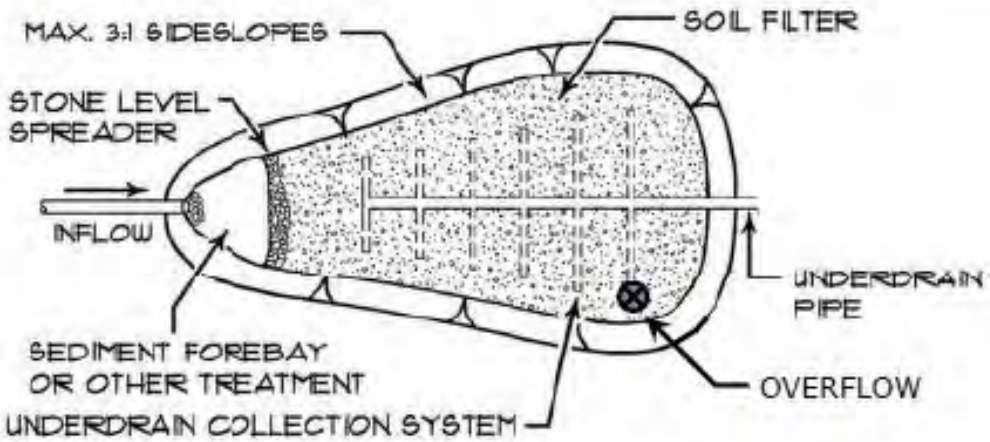
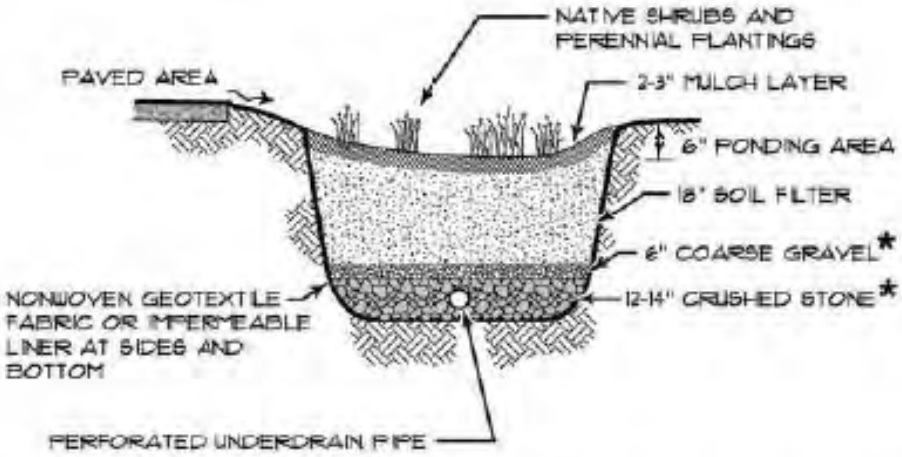
BIORETENTION CELL MAINTENANCE FORM
CP-BMP-8: 557 Main Street


CP-BMP-8: 557 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-9: 532 Main Street

City of South Portland
Water Resource Protection

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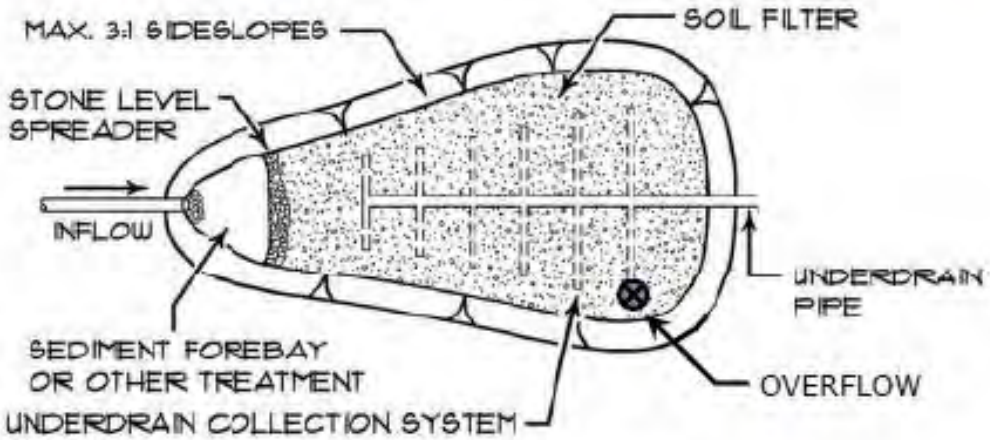
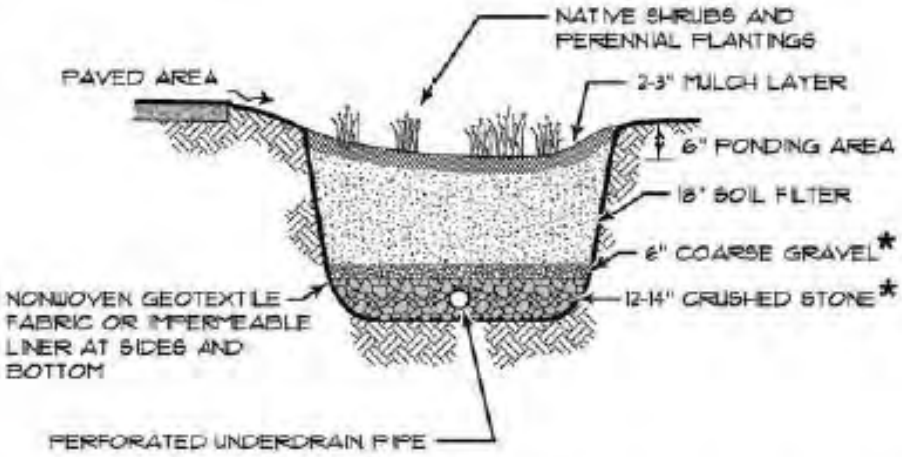
CP-BMP-9: 532 Main Street

CP-BMP-9: 532 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-10: 525 Main Street

City of South Portland
Water Resource Protection

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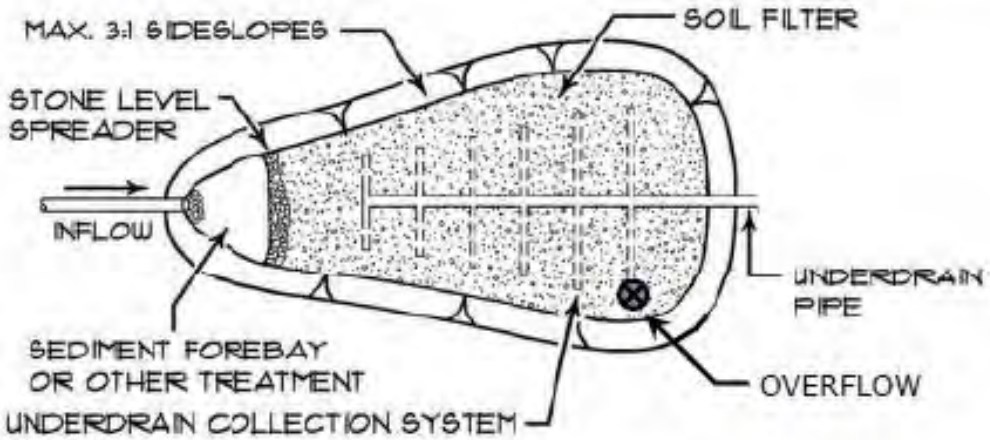
MATERIALS USED:

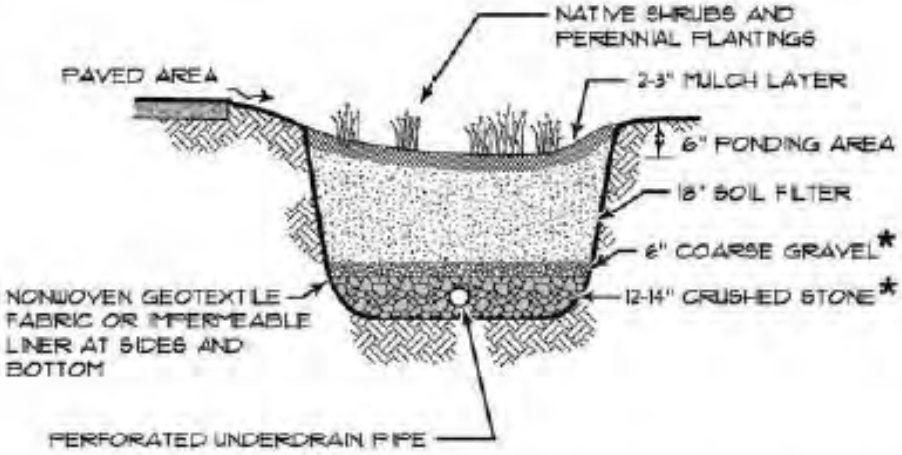
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-10: 525 Main Street

CP-BMP-10: 525 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-11: 515 Main Street

City of South Portland
Water Resource Protection

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

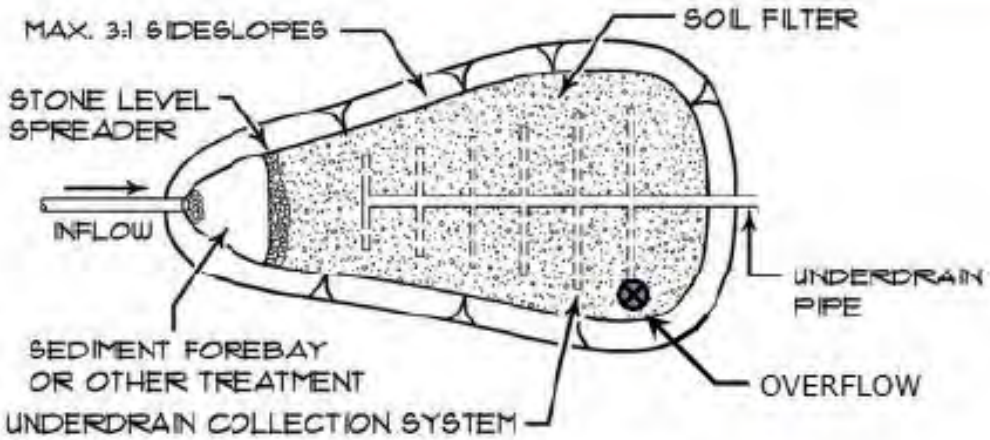
MATERIALS USED:

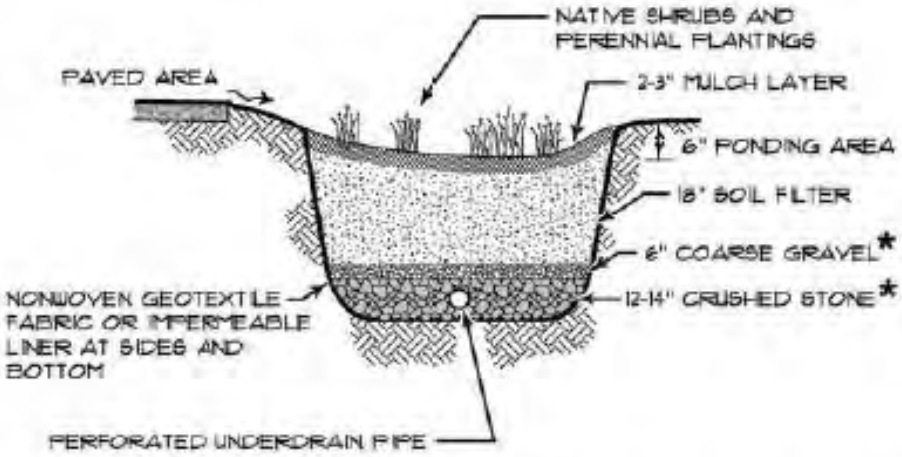
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-11: 515 Main Street

CP-BMP-11: 515 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-12: 501 Main Street

City of South Portland
Water Resource Protection

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

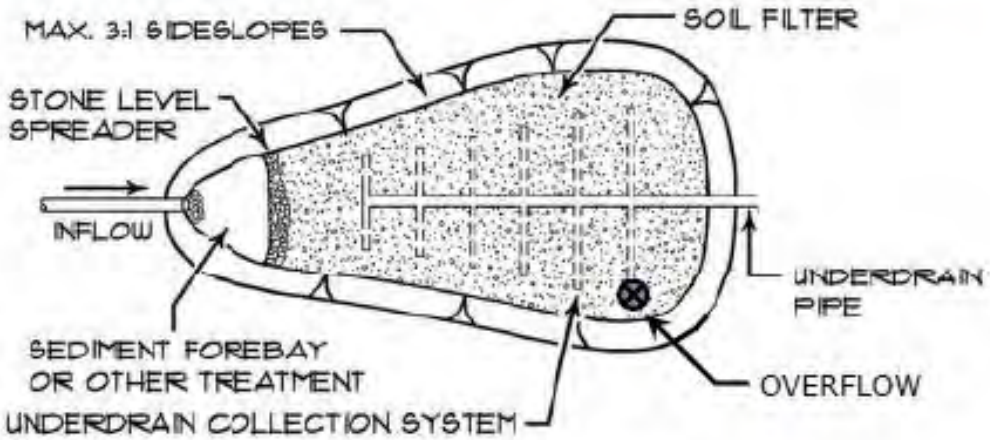
MATERIALS USED:

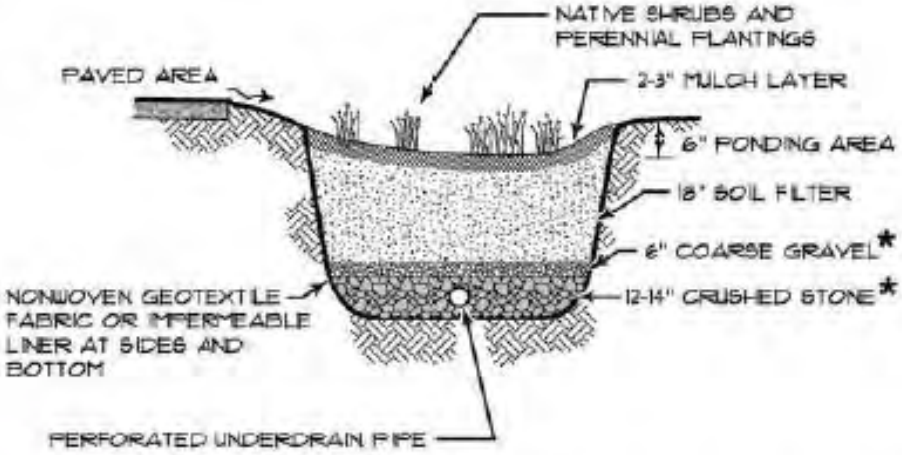
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-12: 501 Main Street

CP-BMP-12: 501 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-13: 461 Main Street

City of South Portland
Water Resource Protection

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

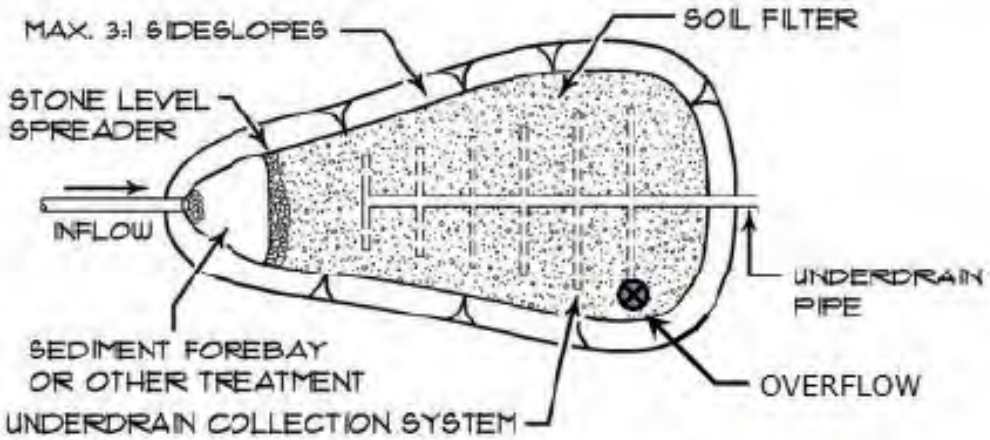
MATERIALS USED:

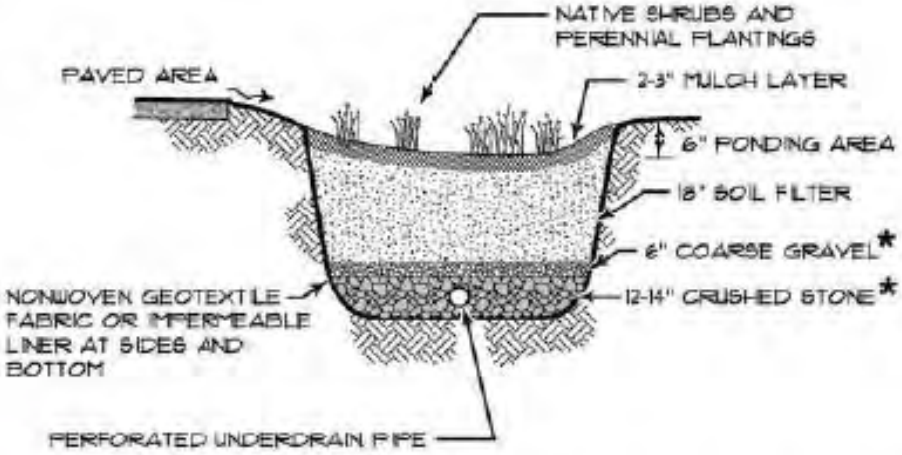
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
CP-BMP-13: 461 Main Street

CP-BMP-13: 461 Main St. Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
KB-BMP-1: Hinckley Park

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

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DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

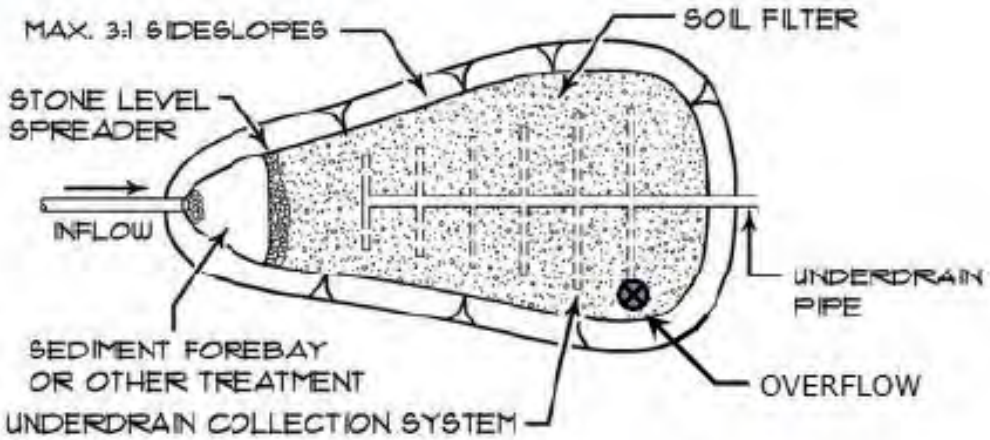
MATERIALS USED:

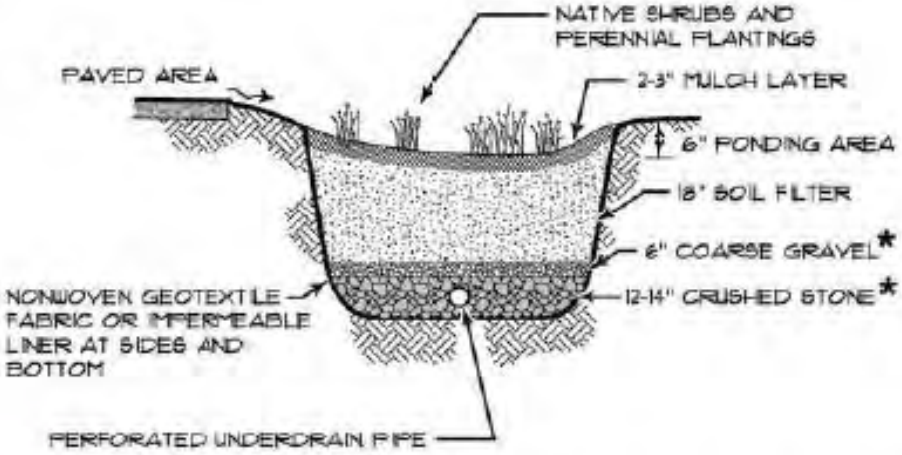
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
KB-BMP-1: Hinckley Park

KB-BMP-1: Hinckley Park Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
LCL-BMP-3: Long Creek Pump Station

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

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COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

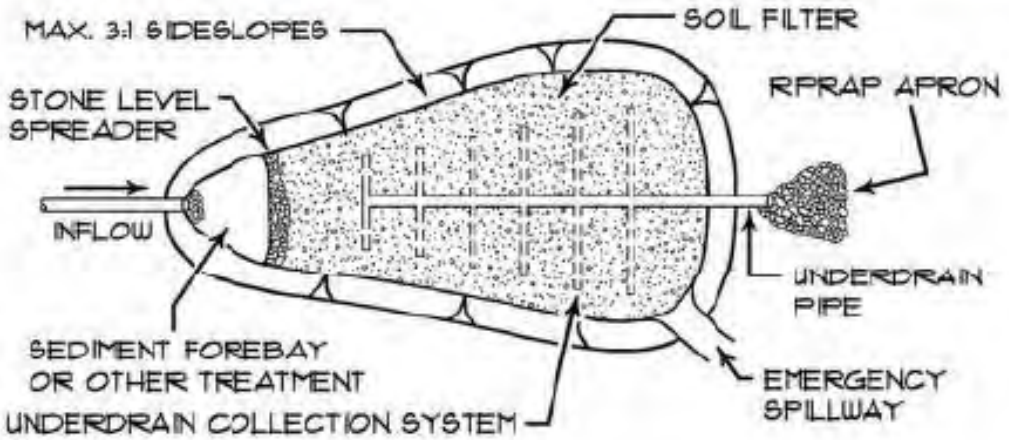
MATERIALS USED:

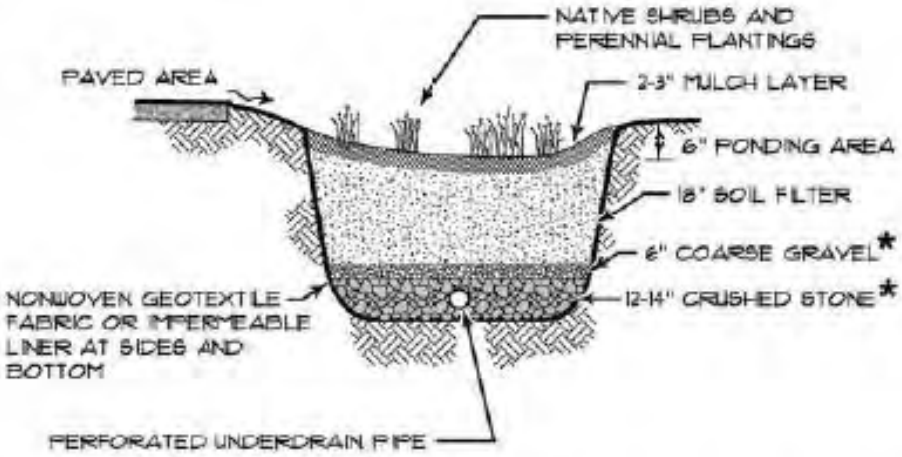
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
LCL-BMP-3: Long Creek Pump Station

LCL-BMP-3: Long Creek Pump Station Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
TB-BMP-1: 72 Simmons Road

City of South Portland
Water Resource Protection

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

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COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
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			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

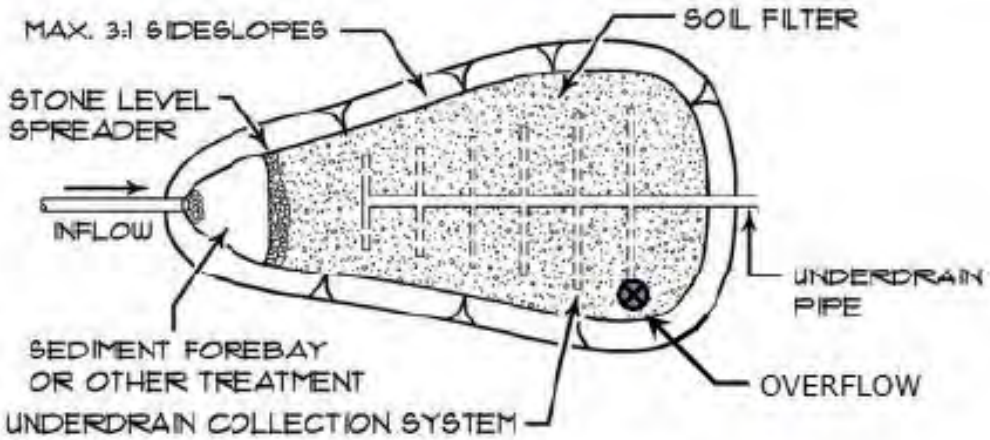
MATERIALS USED:

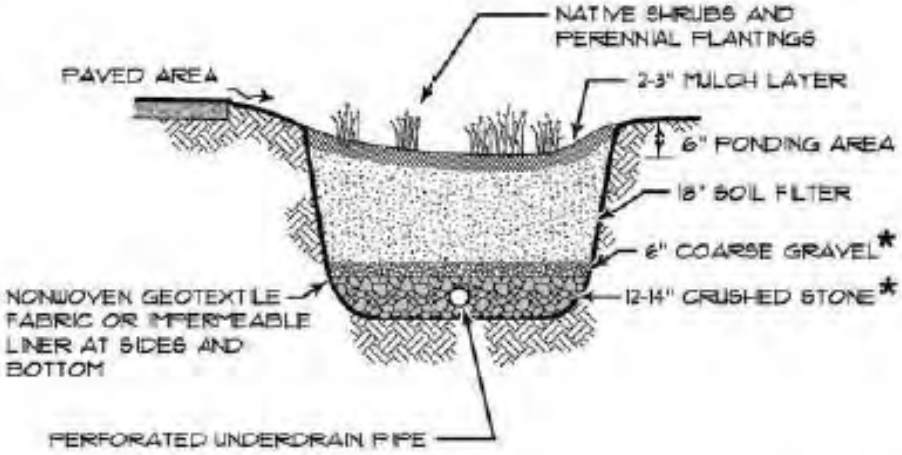
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
TB-BMP-1: 72 Simmons Road

TB-BMP-1: 72 Simmons Rd Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
TI-BMP-1: City Hall / Transit Hub

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

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DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

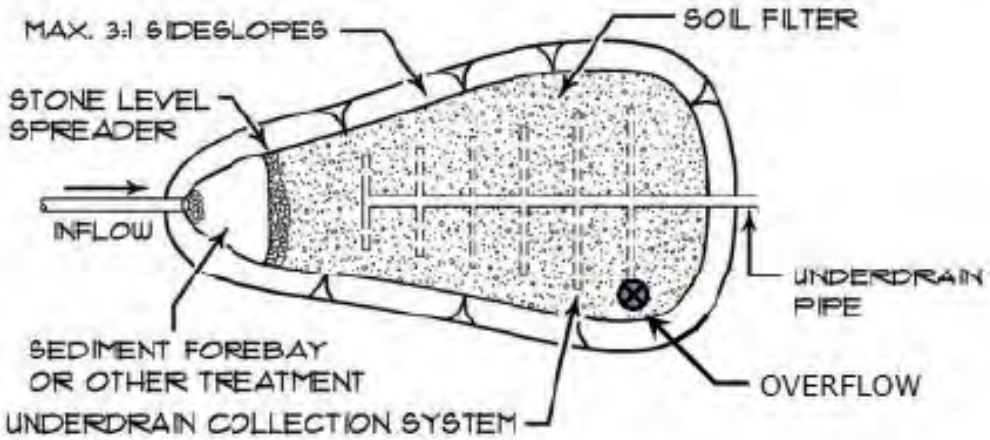
MATERIALS USED:

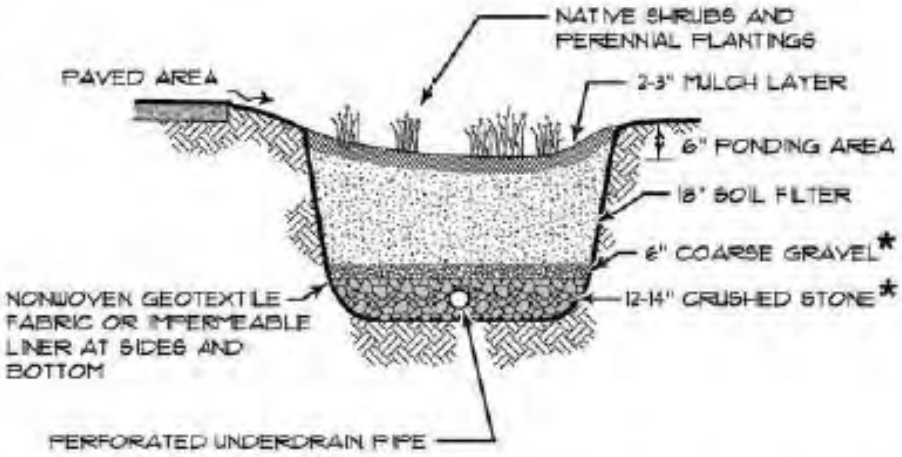
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
TI-BMP-1: City Hall / Transit Hub

TI-BMP-1: City Hall/Transit Hub Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

BIORETENTION CELL MAINTENANCE FORM
TI-BMP-2: City Hall / Transit Hub

OVERVIEW

A bioretention cell, also often referred to as a rain garden, is a system that collects and filters polluted stormwater runoff through the use of vegetated soil filter media. These systems generally include a forebay to trap sediments and use a variety of medium sized plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Replace plants and mulch as needed (mulch layer should be 2-3")	√	
			Remove woody or foreign / invasive plants	√	
			Replace top several inches of filter media	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

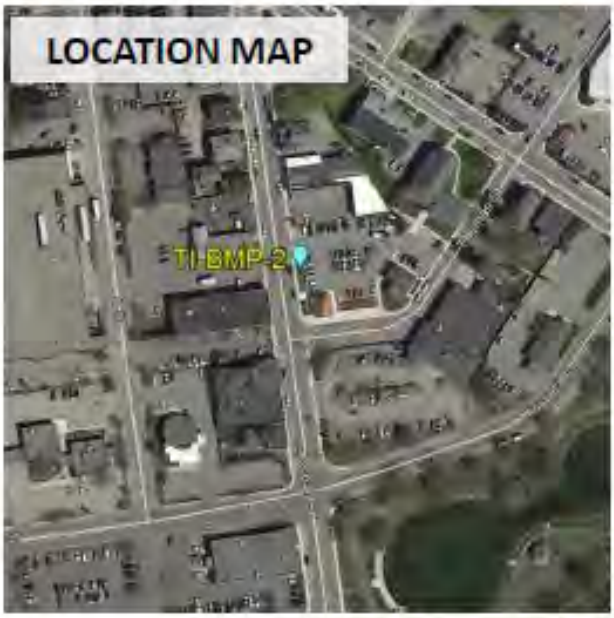
START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

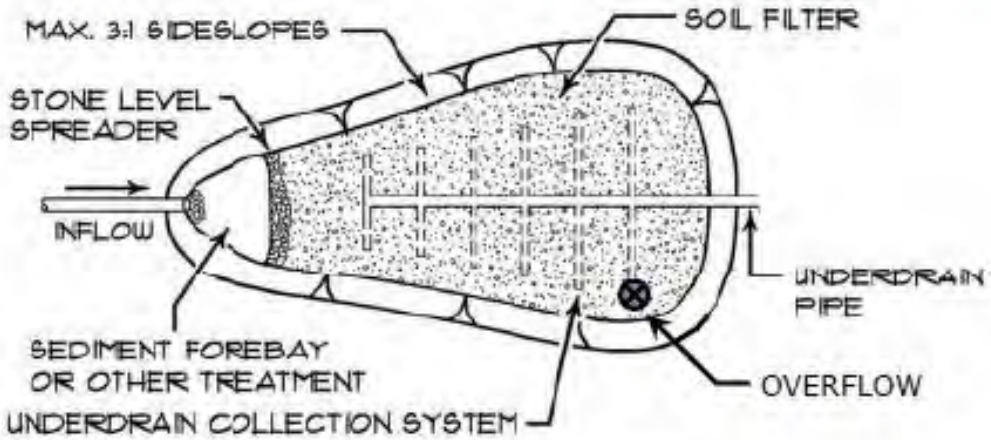
ADDITIONAL COMMENTS:

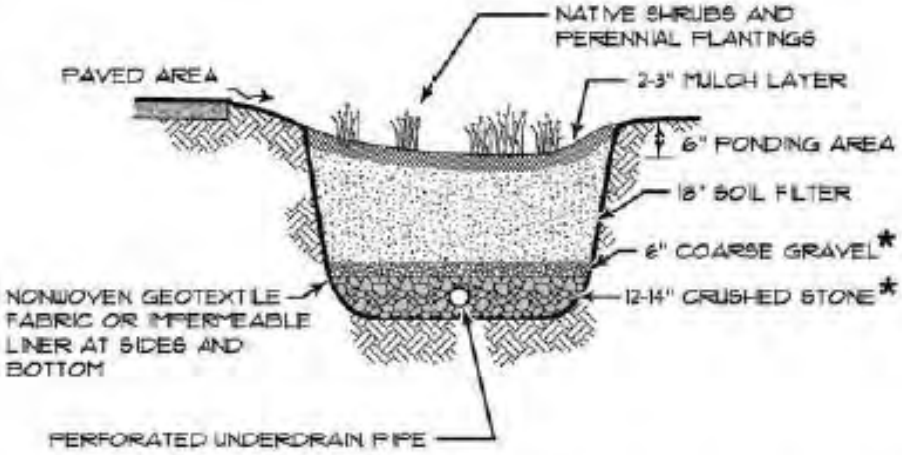
Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

BIORETENTION CELL MAINTENANCE FORM
TI-BMP-2: City Hall / Transit Hub



TI-BMP-2: City Hall/Transit Hub Bioretention Cell





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

DETENTION BASINS & WET PONDS

DETENTION BASIN MAINTENANCE FORM
AC-BMP-1: Community Center

OVERVIEW

Detention basins have a permanent water pool and bench with a gravel trench designed to temporarily hold and discharge stormwater at a controlled rate for flood control and minimal pollutant reduction. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, litter decaying/woody vegetation from embankments	√	
			Repair & revegetate any areas of erosion on embankments & basin	√	
			If grass on embankments >12" mow to <6"	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap in forebay and spillway as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

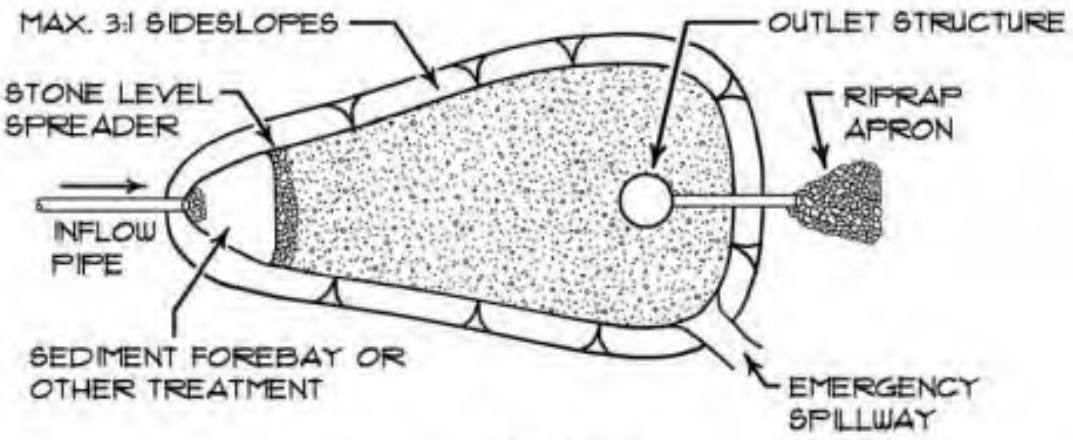
MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

DETENTION BASIN MAINTENANCE FORM
AC-BMP-1: Community Center

AC-BMP-1: Community Center Stormwater Detention Basin



PLAN VIEW

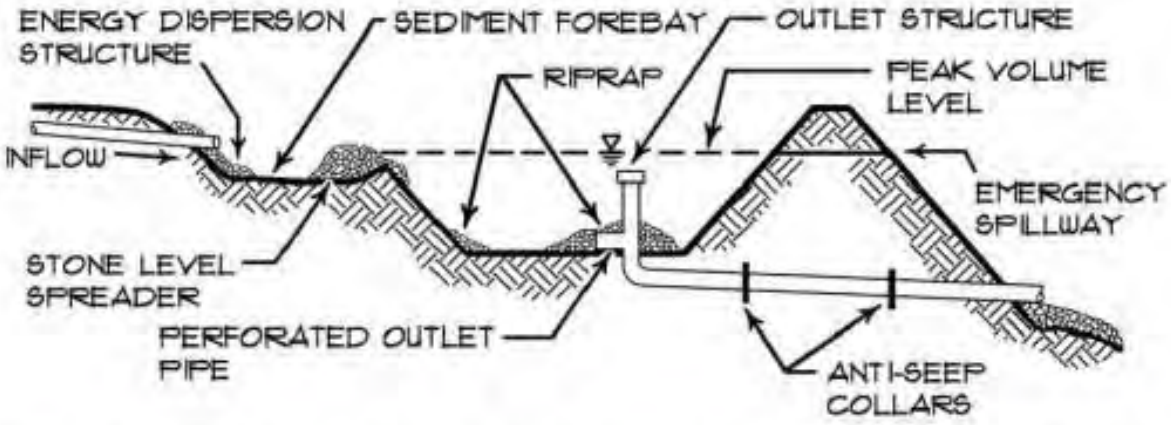


Diagram from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

WET POND MAINTENANCE FORM
GAR-BMP-1: Public Services & Transfer Station

City of South Portland
Water Resource Protection

OVERVIEW

Wet ponds have a permanent water pool and bench with a gravel trench designed to hold and discharge stormwater at a controlled rate for flood & temperature control and pollutant reduction. The types of pollutants removed can include suspended solids, nutrients, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, litter decaying/woody vegetation from embankments	√	
			Repair & revegetate any areas of erosion on embankments & basin	√	
			If grass on embankments >12" mow to <6"	√	
			Remove clogging material from pond bench/gravel trench as needed	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap in forebay and spillway as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

WET POND MAINTENANCE FORM
GAR-BMP-1: Public Services & Transfer Station

GAR-BMP-1: Public Services & Transfer Station Facilities Wet Pond

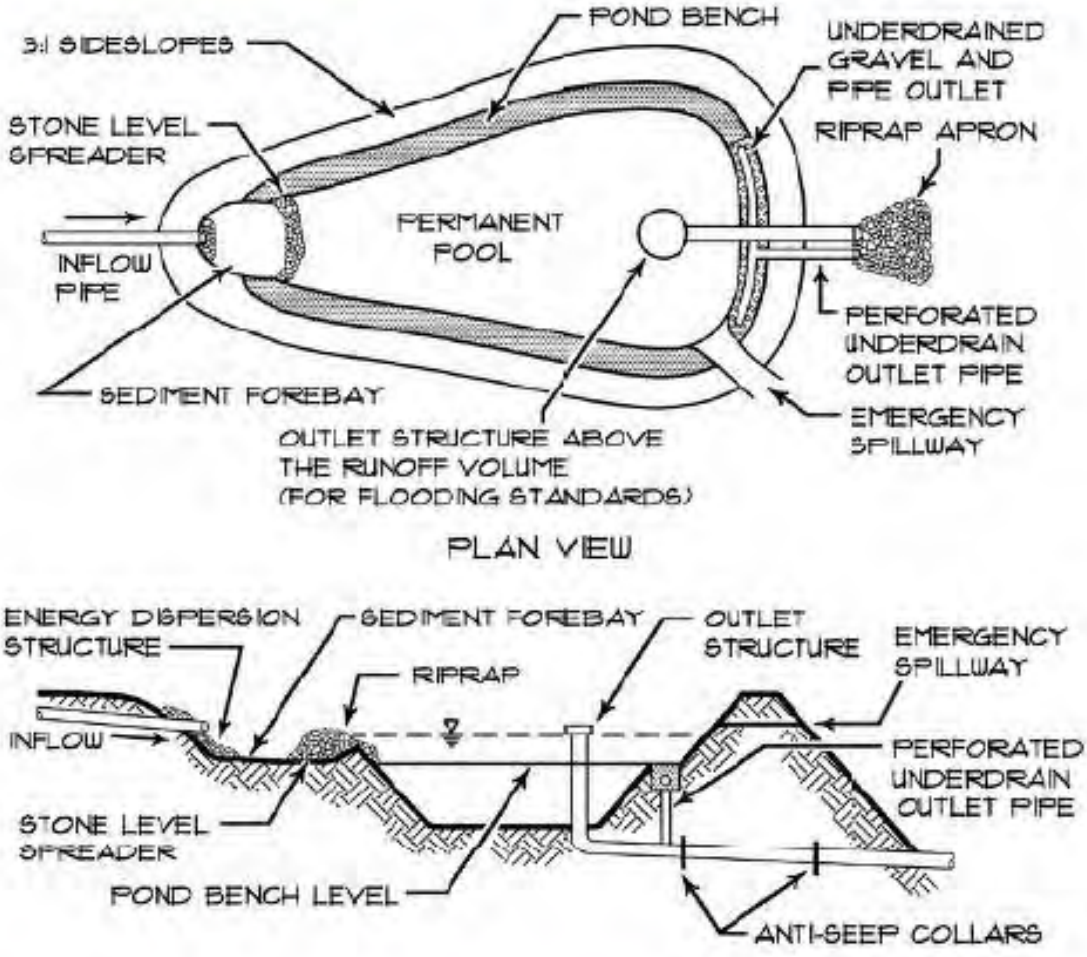


Diagram from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

GRAVEL WETLANDS

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-1: Sunset Avenue North

City of South Portland
Water Resource Protection

OVERVIEW

A gravel wetland is a system that collects and filters polluted stormwater runoff through the use of wetland vegetation in a saturated gravel substrate. These systems generally include a forebay to trap sediments and use a variety of wetlands plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation & litter from embankments & basin	√	
			Repair & revegetate any areas of erosion on embankments & basin	√	
			Remove woody or foreign / invasive plants from embankments & basin	√	
			If grass on embankments >12" mow to <6"	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap in forebay and spillway as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Remove litter & debris from outlet control structure grate as needed		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

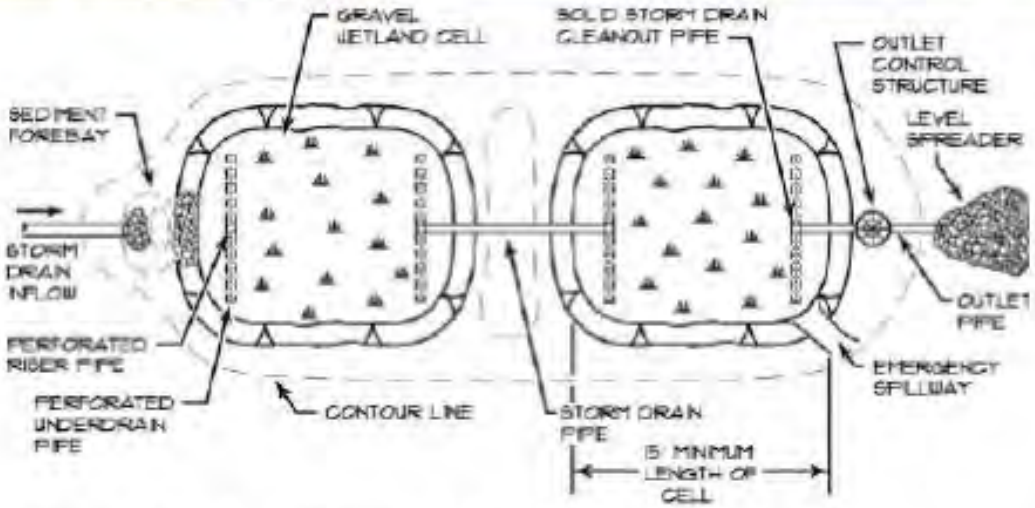
MATERIALS USED:

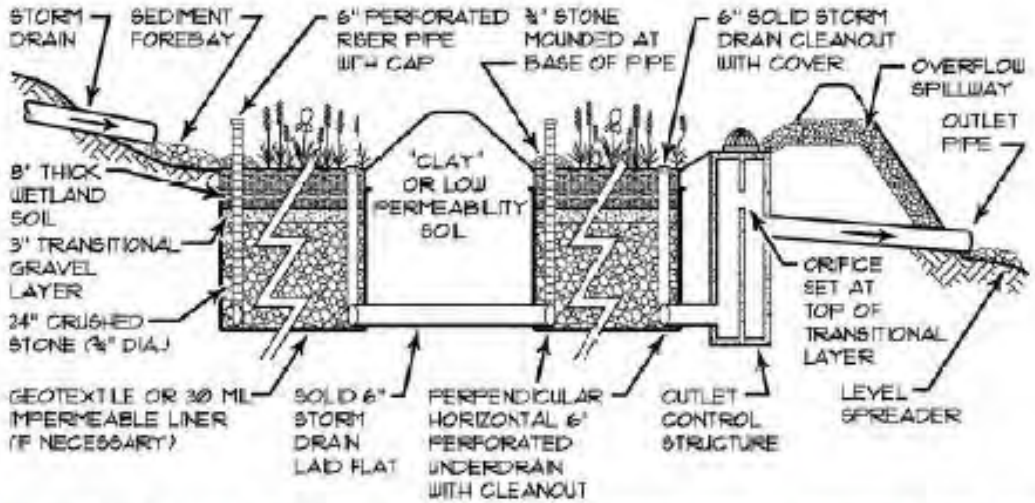
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-1: Sunset Avenue North

CP-BMP-1: Sunset Ave Gravel Wetland - North





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-2: Sunset Avenue South

City of South Portland
Water Resource Protection

OVERVIEW

A gravel wetland is a system that collects and filters polluted stormwater runoff through the use of wetland vegetation in a saturated gravel substrate. These systems generally include a forebay to trap sediments and use a variety of wetlands plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation & litter from embankments & basin	√	
			Repair & revegetate any areas of erosion on embankments & basin	√	
			Remove woody or foreign / invasive plants from embankments & basin	√	
			If grass on embankments >12" mow to <6"	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap in forebay and spillway as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Remove litter & debris from outlet control structure grate as needed		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

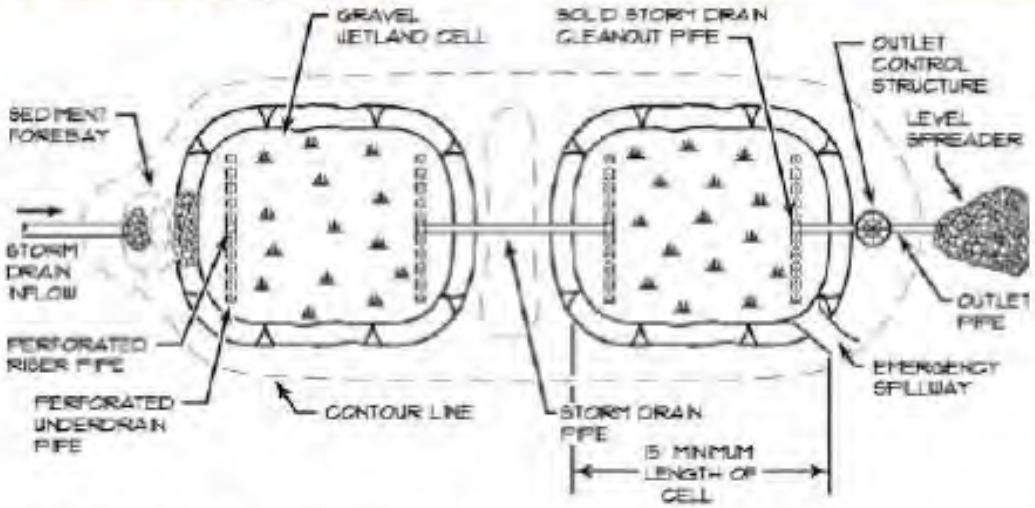
ADDITIONAL COMMENTS:

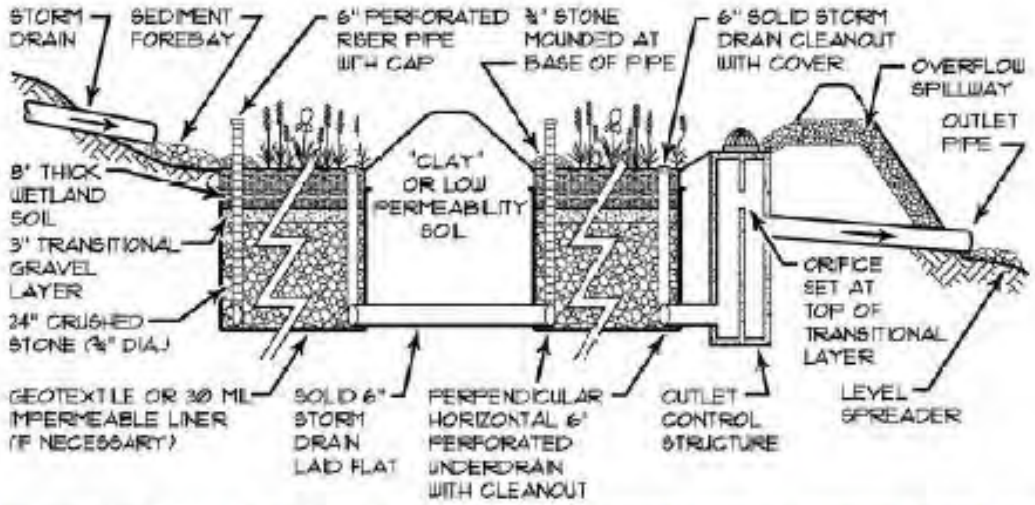
Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-2: Sunset Avenue South

City of South Portland
Water Resource Protection

CP-BMP-2: Sunset Ave Gravel Wetland - South





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-14: Wythburn Road

City of South Portland
Water Resource Protection

OVERVIEW

A gravel wetland is a system that collects and filters polluted stormwater runoff through the use of wetland vegetation in a saturated gravel substrate. These systems generally include a forebay to trap sediments and use a variety of wetlands plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation & litter from embankments & basin	√	
			Repair & revegetate any areas of erosion on embankments & basin	√	
			Remove woody or foreign / invasive plants from embankments & basin	√	
			If grass on embankments >12" mow to <6"	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap in forebay and spillway as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Remove litter & debris from outlet control structure grate as needed		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

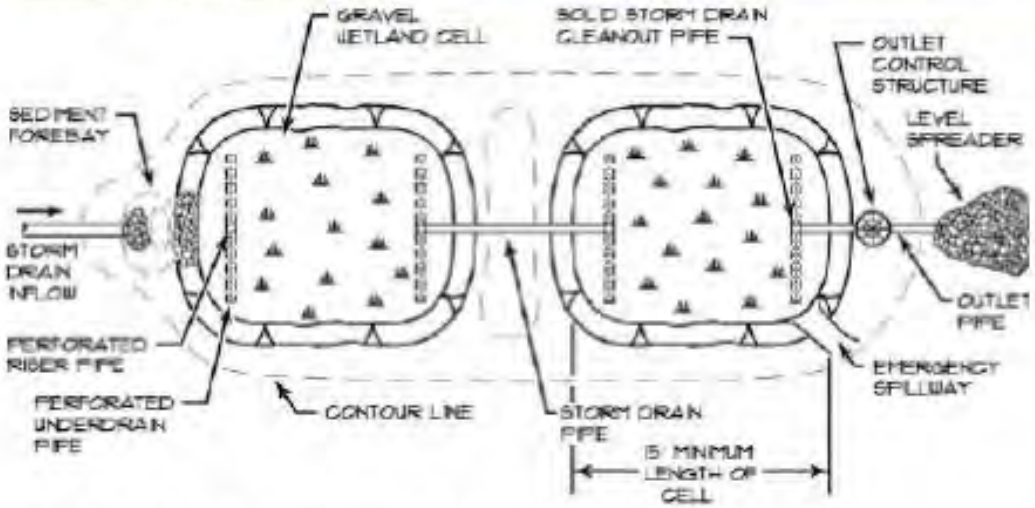
ADDITIONAL COMMENTS:

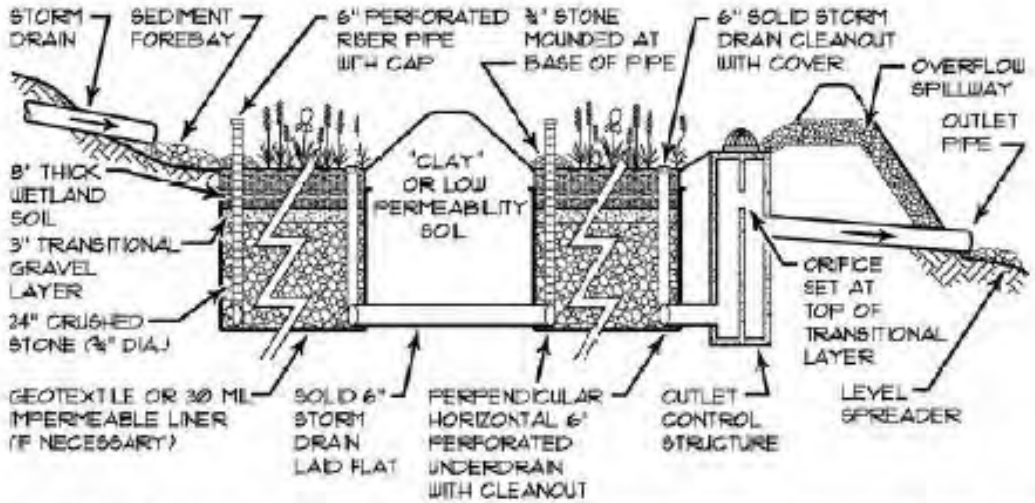
Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-14: Wythburn Road

City of South Portland
Water Resource Protection

CP-BMP-14: Wythburn Road Gravel Wetland





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-15: Memorial Middle School

City of South Portland
Water Resource Protection

OVERVIEW

A gravel wetland is a system that collects and filters polluted stormwater runoff through the use of wetland vegetation in a saturated gravel substrate. These systems generally include a forebay to trap sediments and use a variety of wetlands plants to remove many common pollutants, such as bacteria, nutrients, and petroleum products. They also usually have an underdrain system that discharges to the City's stormwater system.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation & litter from embankments & basin	√	
			Repair & revegetate any areas of erosion on embankments & basin	√	
			Remove woody or foreign / invasive plants from embankments & basin	√	
			If grass on embankments >12" mow to <6"	√	
			Remove accumulated sediment from pretreatment area (forebay)		√
			Replace / repair stone or riprap in forebay and spillway as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Remove litter & debris from outlet control structure grate as needed		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

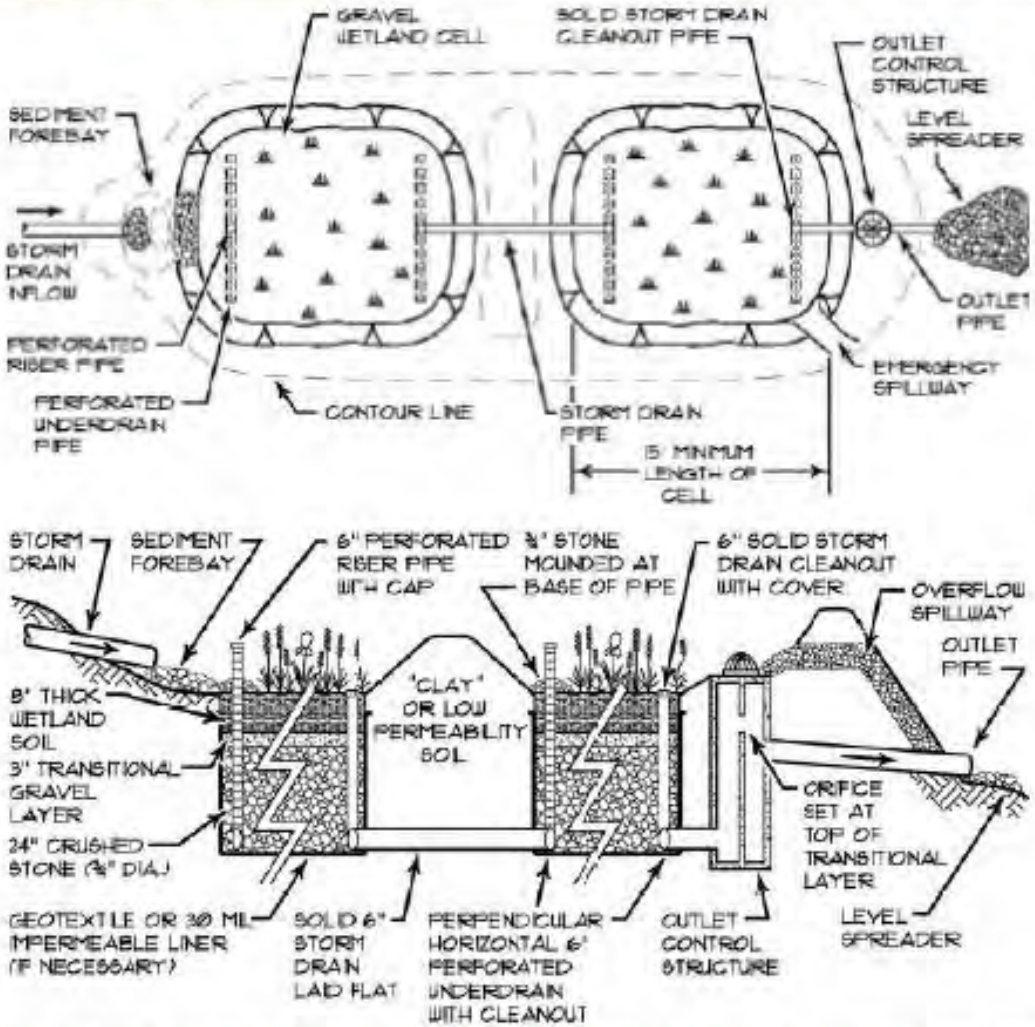
MATERIALS USED:

ADDITIONAL COMMENTS:

GRAVEL WETLAND MAINTENANCE FORM
CP-BMP-15: Memorial Middle School

City of South Portland
Water Resource Protection

CP-BMP-15: Memorial Middle School Gravel Wetland



Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVMENT

PERMEABLE PAVEMENT MAINTENANCE FORM
LCL-BMP-1: Long Creek Pump Station Paver Stones

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
LCL-BMP-1: Long Creek Pump Station Paver Stones

LCL-BMP-1: Long Creek Pump Station Permeable Pavers (parking area)

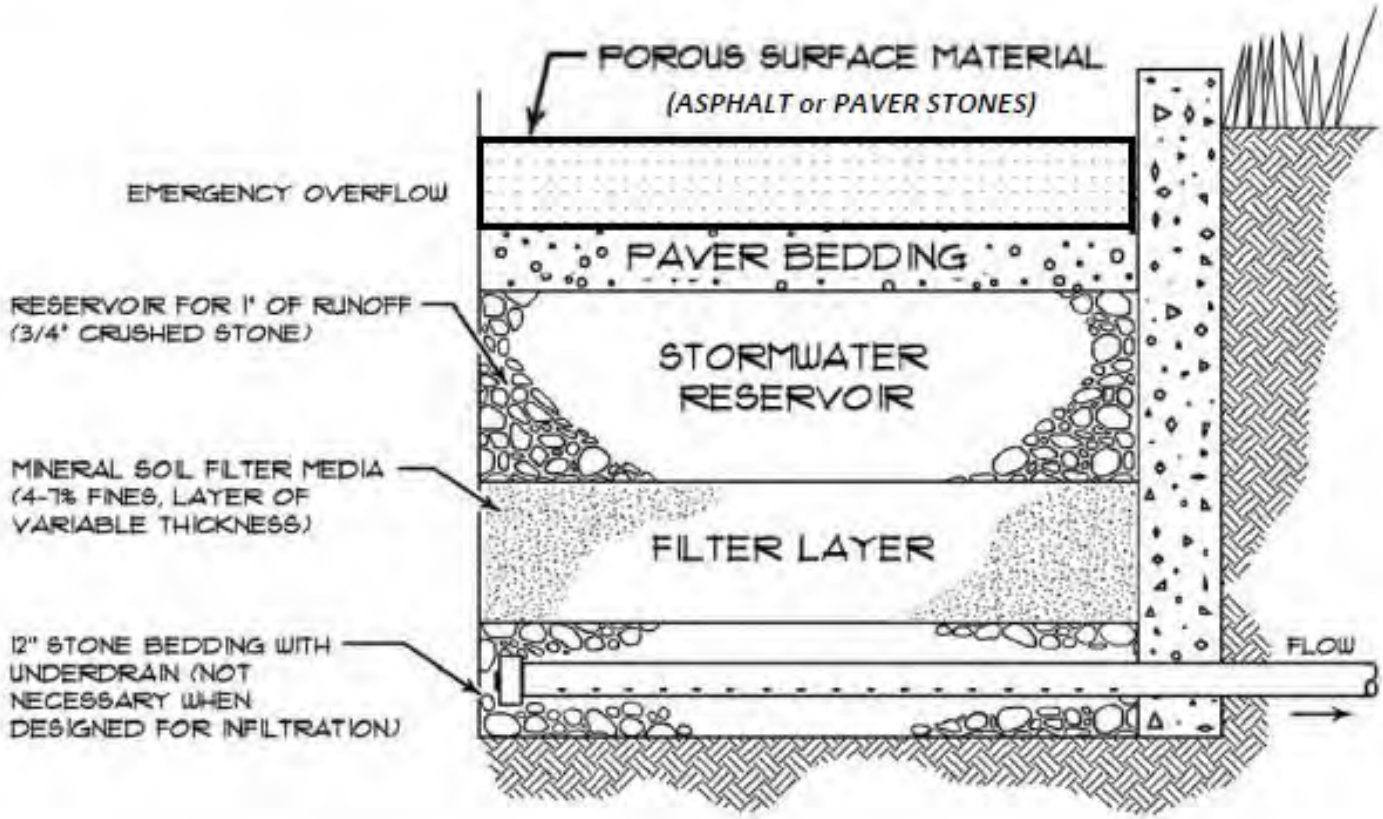


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVEMENT MAINTENANCE FORM
LCL-BMP-2: Long Creek Pump Station Asphalt

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
LCL-BMP-2: Long Creek Pump Station Asphalt

LCL-BMP-2: Long Creek Pump Station Porous Asphalt (access road)

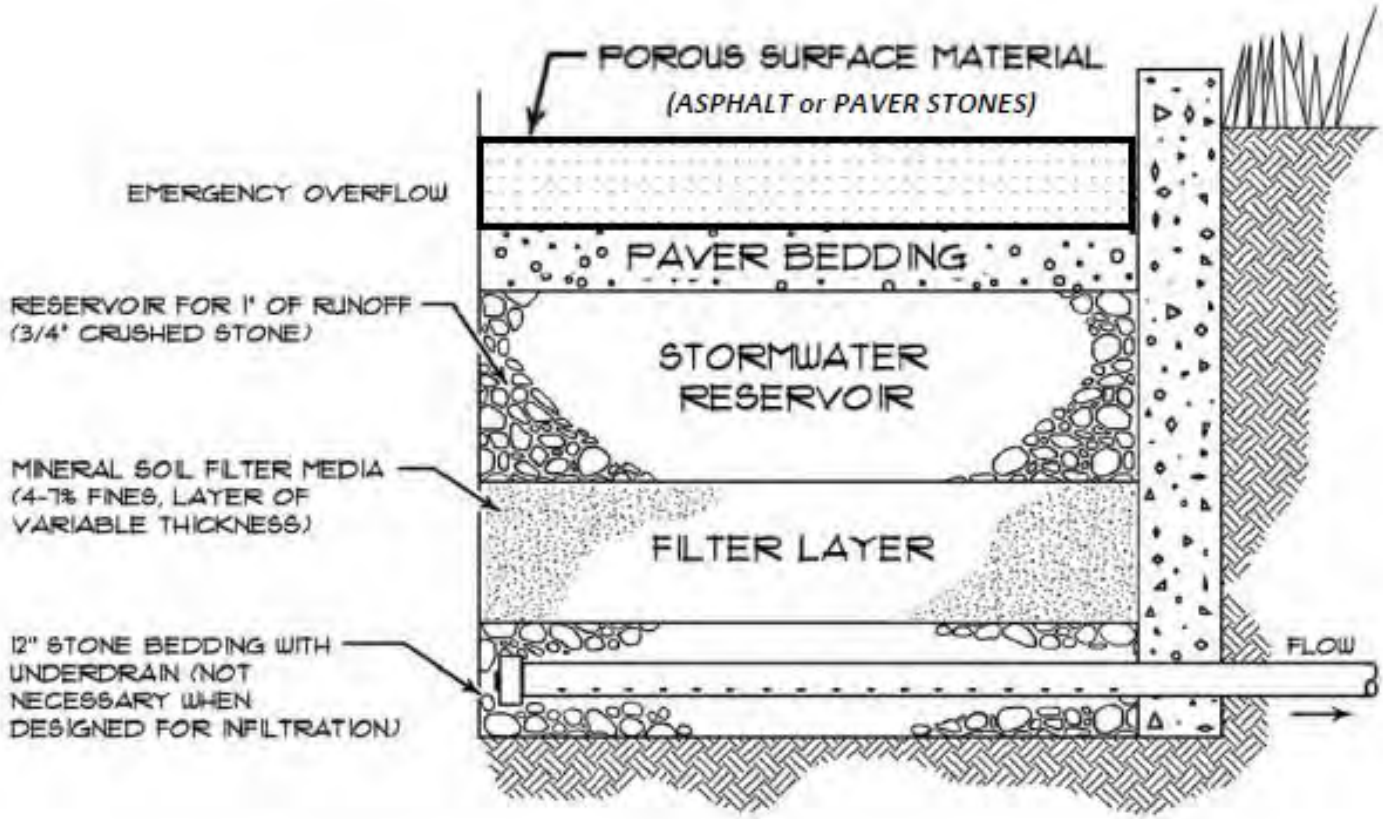


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-3: City Hall Paver Stones

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

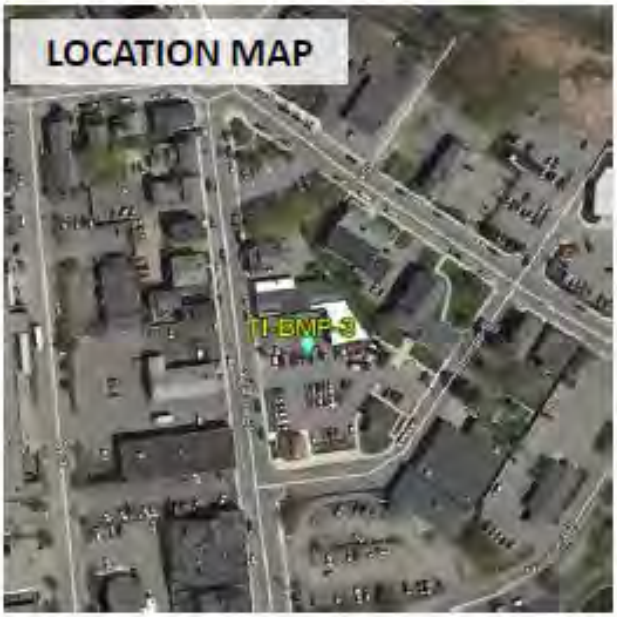
START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-3: City Hall Paver Stones



TI-BMP-3: City Hall Permeable Pavers (16 parking stalls)

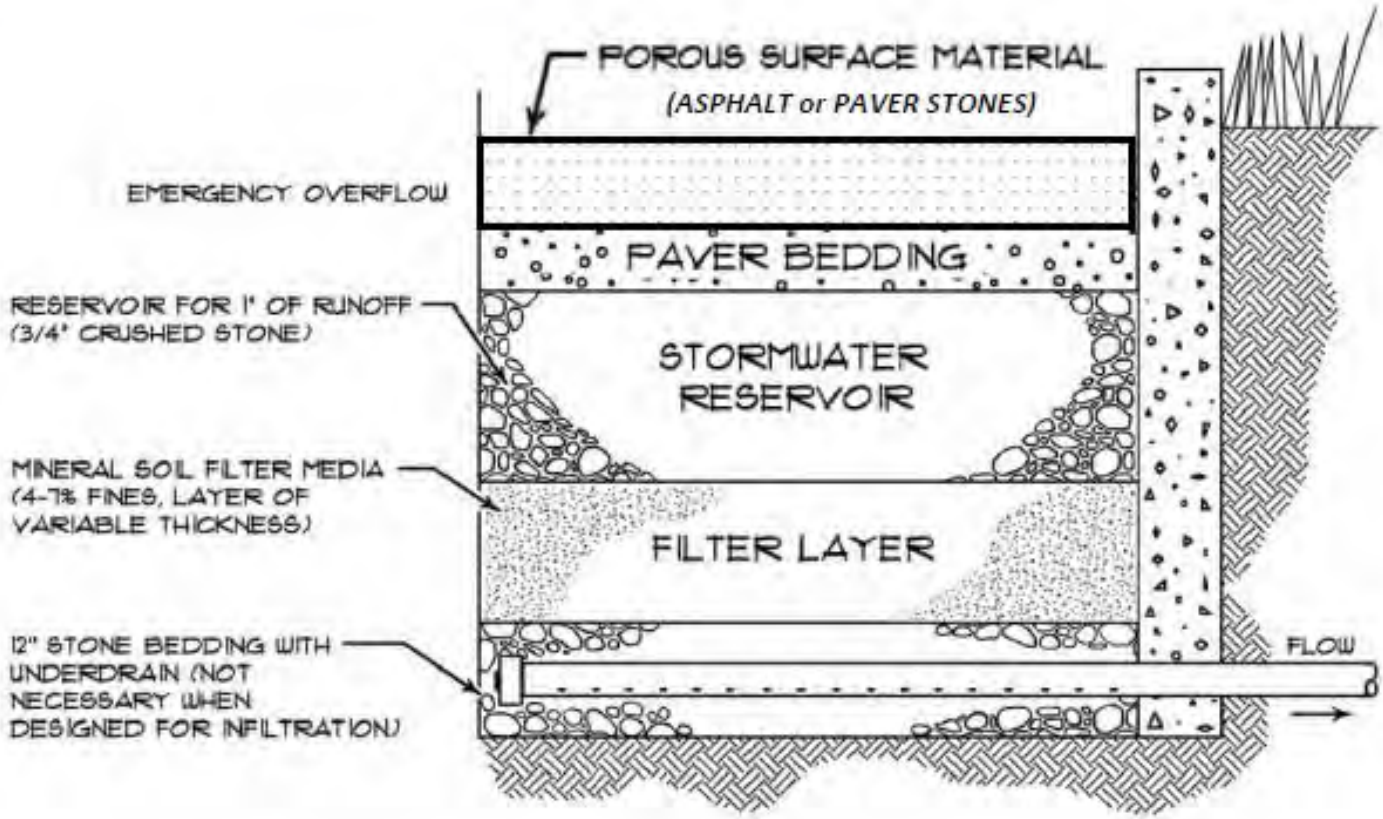


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-4: City Hall Paver Stones

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-4: City Hall Paver Stones

TI-BMP-4: City Hall Permeable Pavers (3 parking stalls)

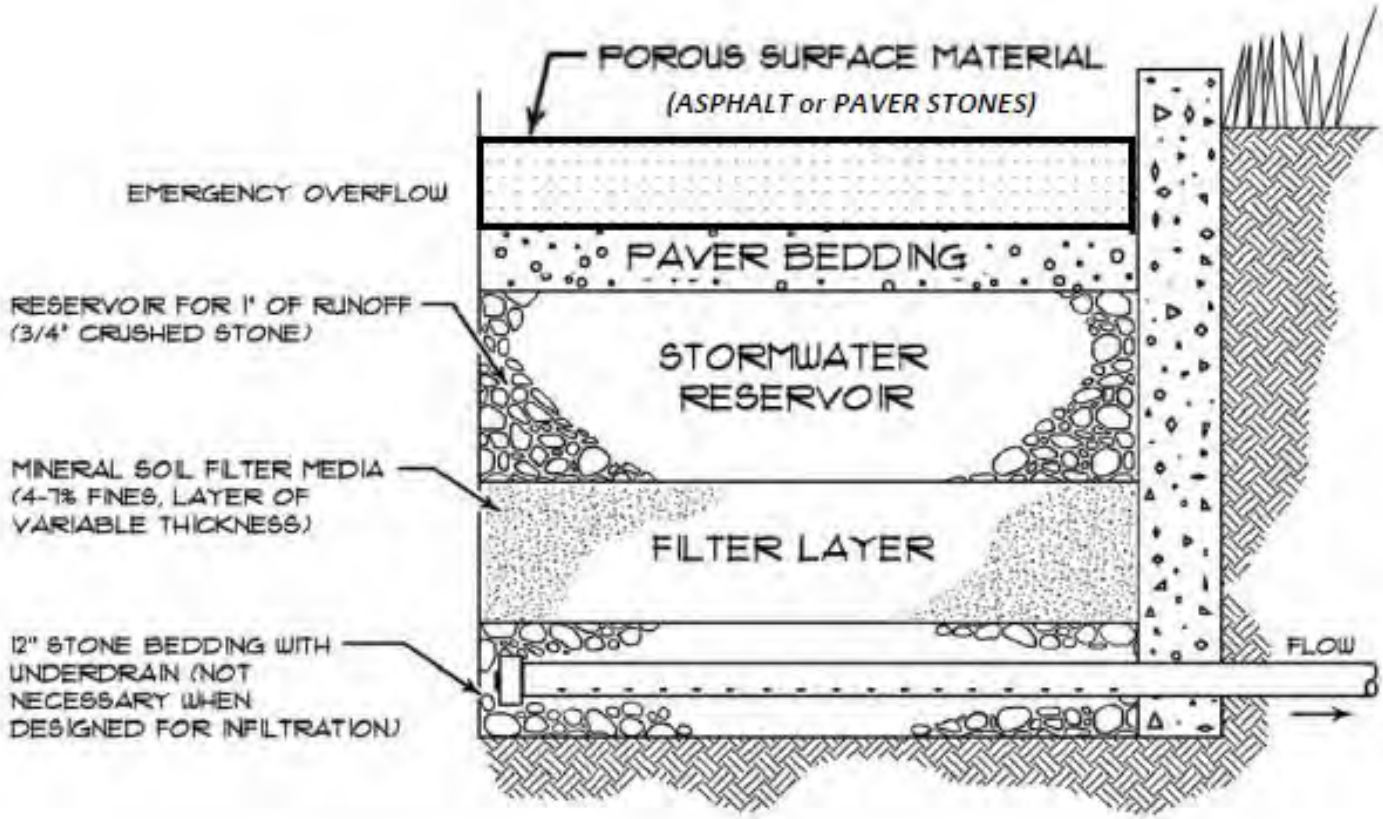


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-5: City Hall Paver Stones

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

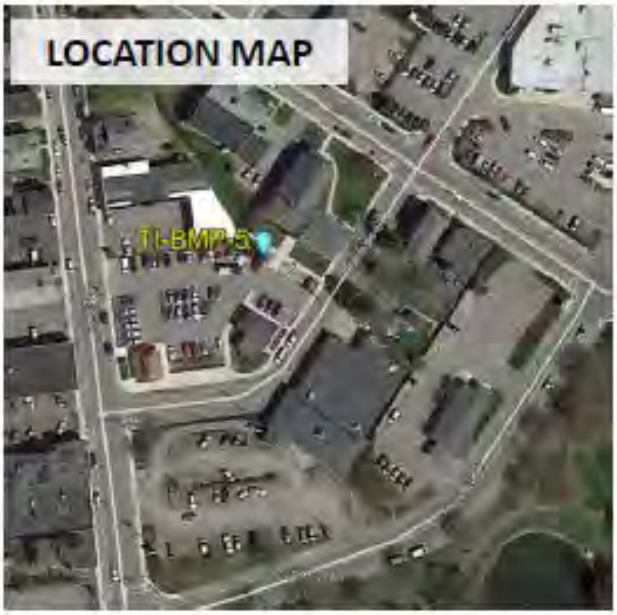
START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-5: City Hall Paver Stones



TI-BMP-5: City Hall Permeable Pavers (2 parking stalls)

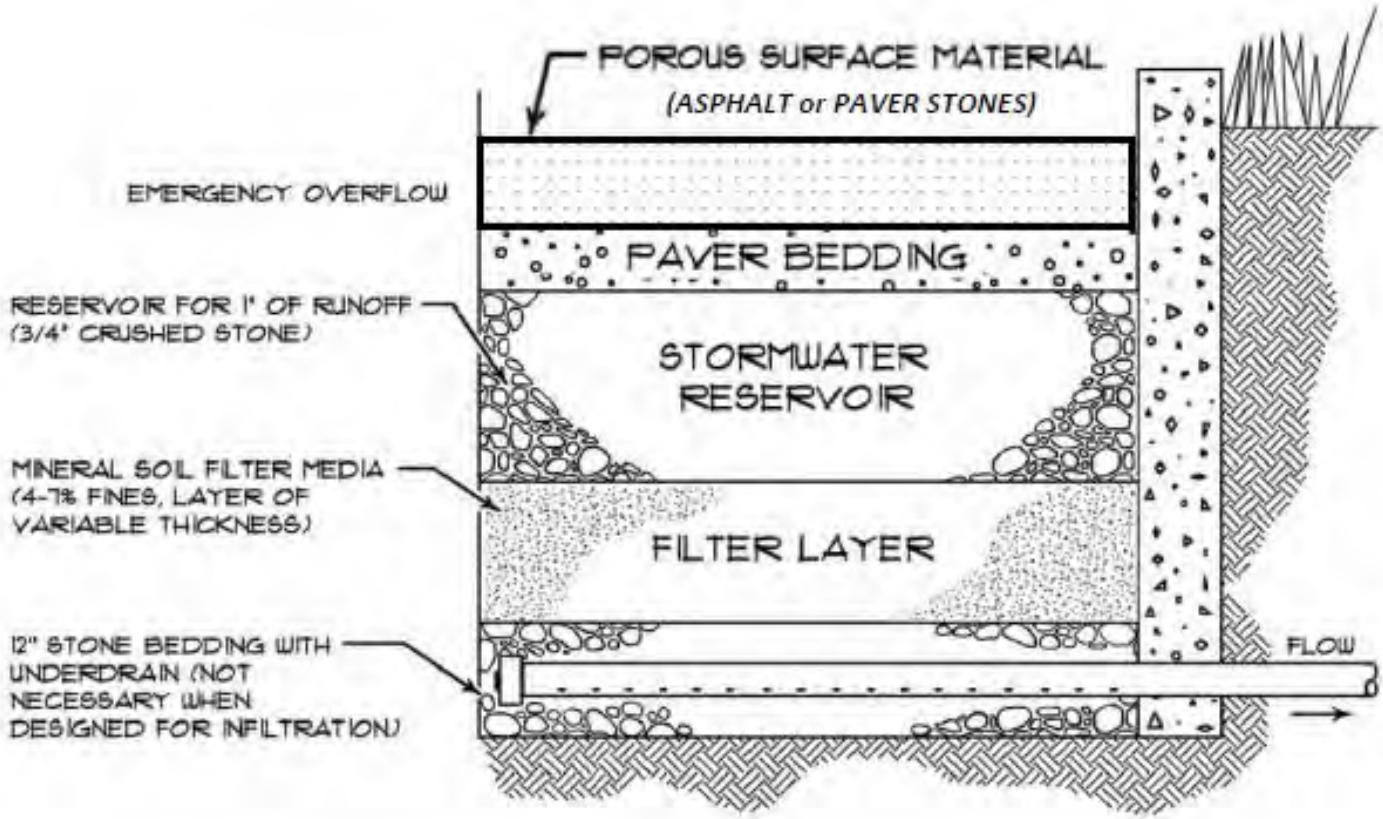


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-6: City Hall Paver Stones

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

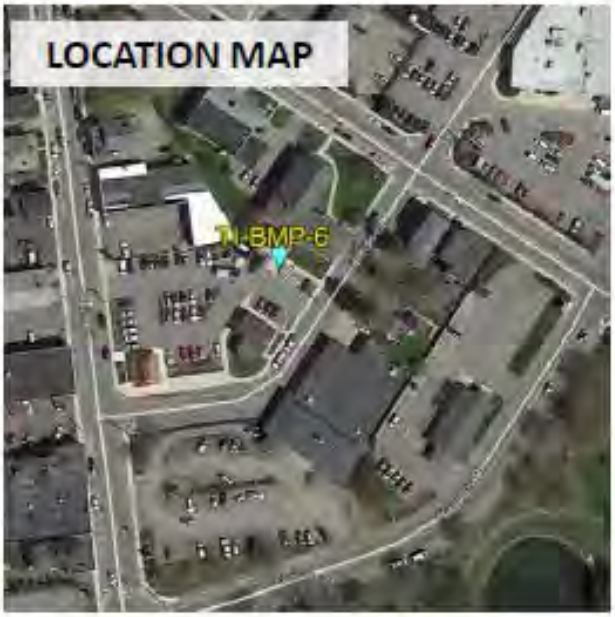
START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-6: City Hall Paver Stones



TI-BMP-6: City Hall Permeable Pavers (1 parking stall)

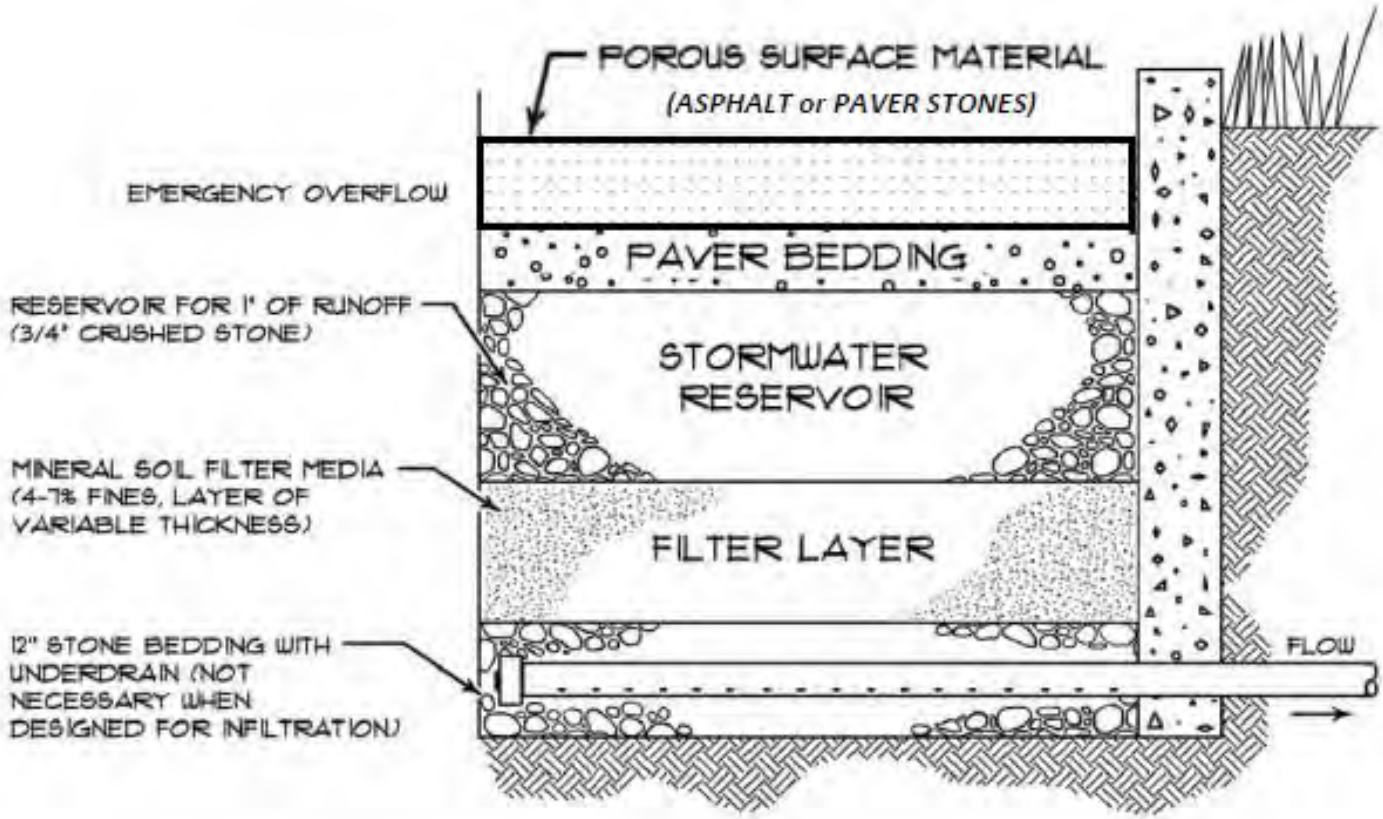


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-7: City Hall Paver Stones

OVERVIEW

Permeable pavement consists asphalt or concrete paver stones underlain by porous sub-base materials that allow stormwater to infiltrate rather than runoff from paved parking areas. There are also perforated underdrain pipes that discharge to the City's stormwater system or directly to a nearby surface water. Permeable pavement cools and reduces runoff volume while removing many pollutants including hydrocarbons, metals and suspended solids.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By		
Yes	No	N/A		Parks	WRP	DPW
			Repair & revegetate any erosion areas discharging sediment onto pavement	√		
			Remove accumulated sediment from pavement with regen-vac sweeper			√
			Temporarily repair potholes & cracks with patching mix			√
			Replace badly damaged paver stones & restore proper grade as needed			√
			High pressure wash paver stones to restore permeability as needed			√
			Replace sand / stone dust between paver stone joints as needed			√
			Remove excess accumulated sediment from any subsurface structures		√	
			Properly dispose of any sediment removed	√	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

PERMEABLE PAVEMENT MAINTENANCE FORM
TI-BMP-7: City Hall Paver Stones

TI-BMP-7: City Hall Permeable Pavers (walkway)

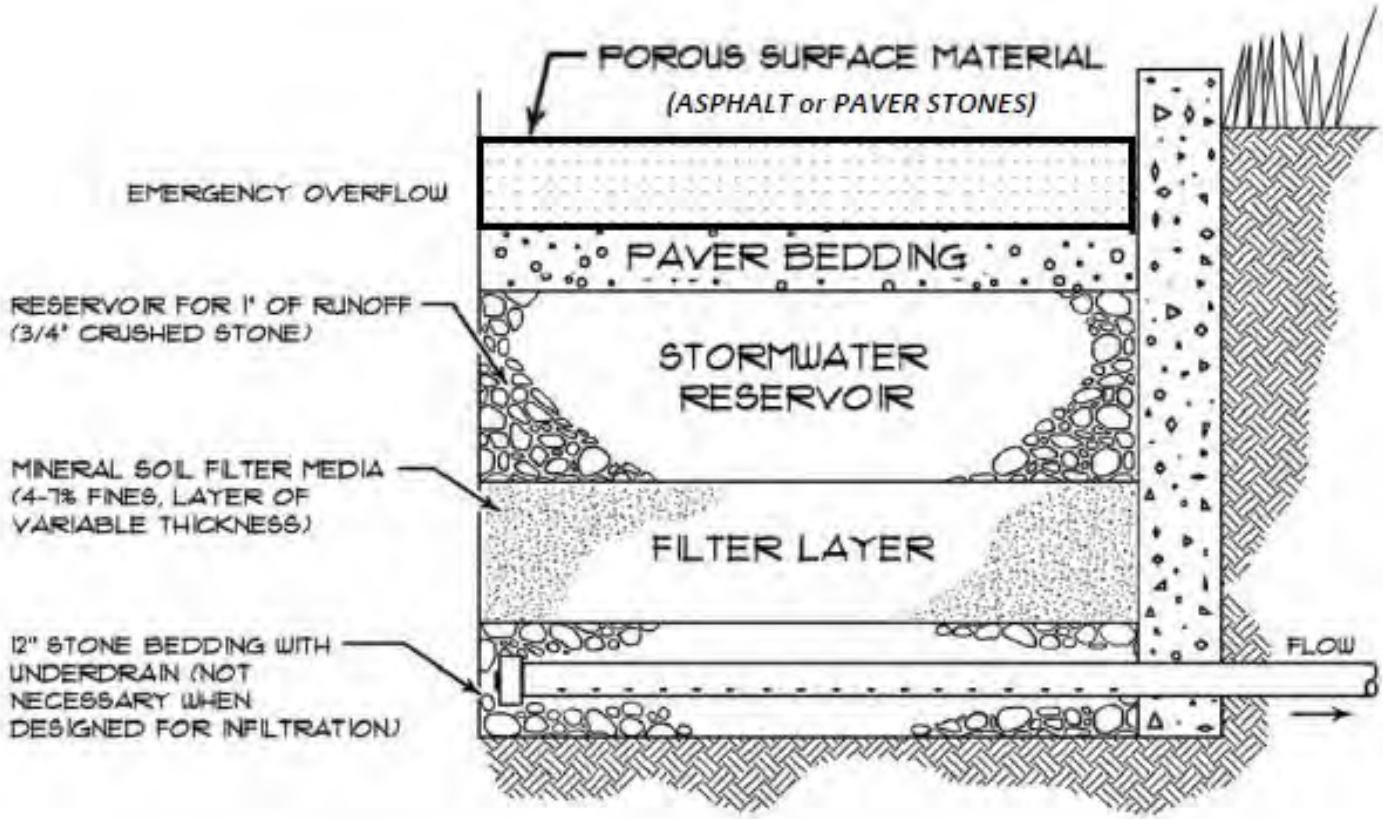


Diagram adapted from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

UNDERDRAINED SOIL FILTERS

UNDERDRAINED SOIL FILTER MAINTENANCE FORM
AC-BMP-7: High School Tennis Court - South

OVERVIEW

Vegetated (often grassed) underdrained soil filters capture, retain and treat stormwater by passing it through a soil filter media consisting of silty sand and organic matter. The types of pollutants removed include suspended solids, nitrogen, phosphorus, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and sediment as needed	√	
			Mow to maintain grass height of no more than 6" as needed	√	
			Reseed bare spots to maintain complete grass coverage as needed	√	
			Replace top several inches of filter media if recommended by inspection	√	
			Remove accumulated sediment from forebay (if applicable)		√
			Replace / repair stone or riprap as needed (if applicable)		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

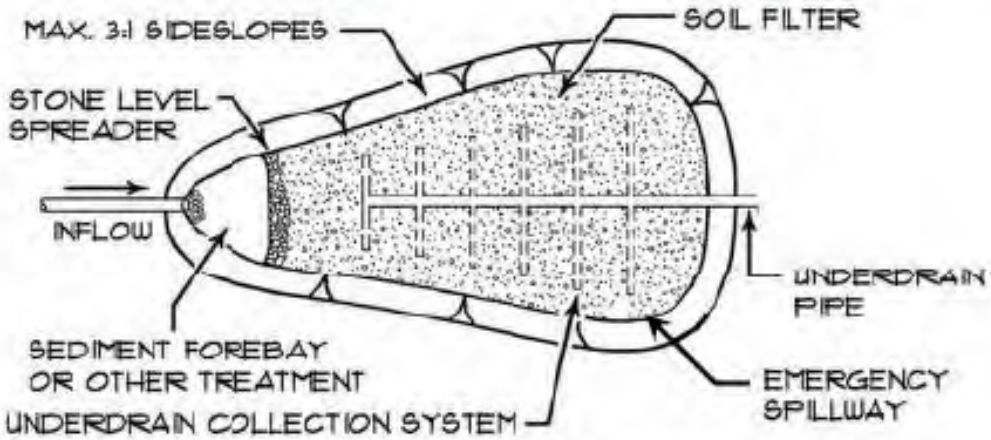
MATERIALS USED:

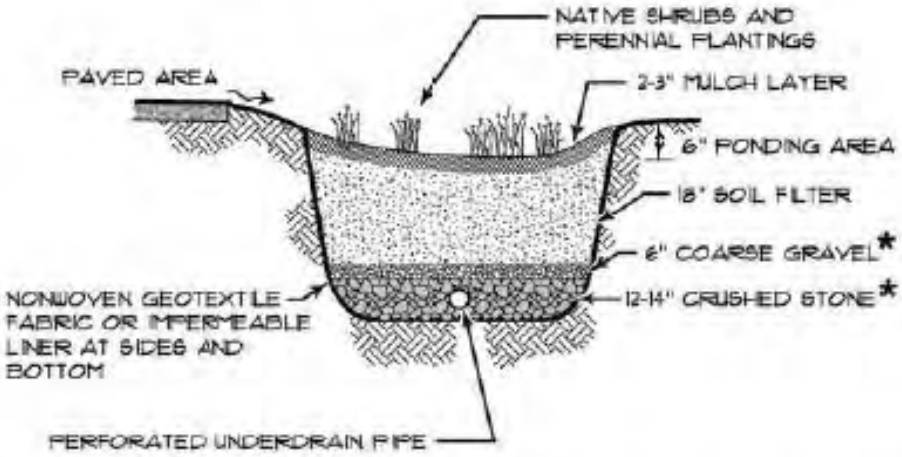
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

UNDERDRAINED SOIL FILTER MAINTENANCE FORM
AC-BMP-7: High School Tennis Court - South

AC-BMP-7: High School Tennis Court South Underdrained Soil Filter





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

UNDERDRAINED SOIL FILTER MAINTENANCE FORM
AC-BMP-8: High School Tennis Court - Central

OVERVIEW

Vegetated (often grassed) underdrained soil filters capture, retain and treat stormwater by passing it through a soil filter media consisting of silty sand and organic matter. The types of pollutants removed include suspended solids, nitrogen, phosphorus, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and sediment as needed	√	
			Mow to maintain grass height of no more than 6" as needed	√	
			Reseed bare spots to maintain complete grass coverage as needed	√	
			Replace top several inches of filter media if recommended by inspection	√	
			Remove accumulated sediment from forebay (if applicable)		√
			Replace / repair stone or riprap as needed (if applicable)		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

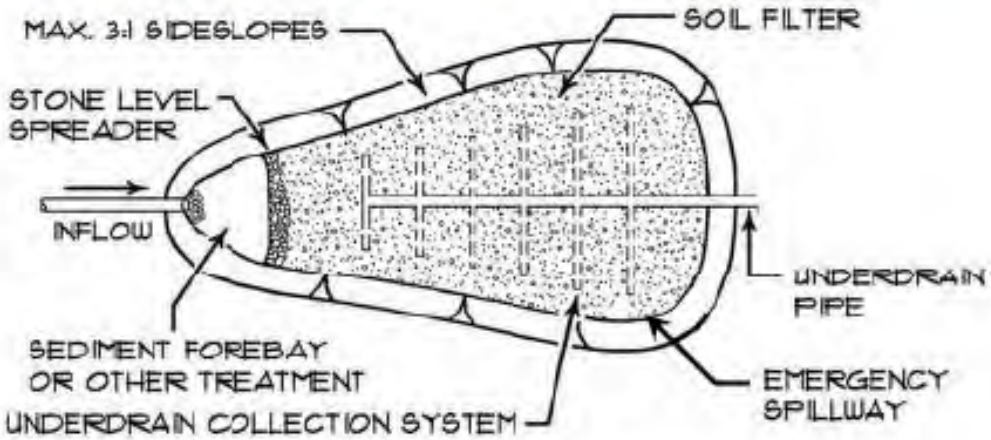
MATERIALS USED:

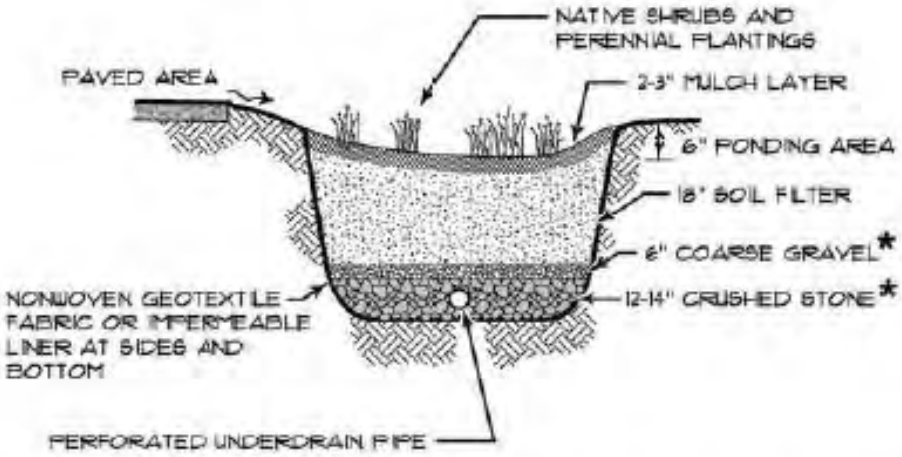
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

UNDERDRAINED SOIL FILTER MAINTENANCE FORM
AC-BMP-8: High School Tennis Court - Central

AC-BMP-8: High School Tennis Court Central Underdrained Soil Filter





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

UNDERDRAINED SOIL FILTER MAINTENANCE FORM
MC-BMP-1: Mahoney Middle School

OVERVIEW

Vegetated (often grassed) underdrained soil filters capture, retain and treat stormwater by passing it through a soil filter media consisting of silty sand and organic matter. The types of pollutants removed include suspended solids, nitrogen, phosphorus, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and sediment as needed	√	
			Mow to maintain grass height of no more than 6" as needed	√	
			Reseed bare spots to maintain complete grass coverage as needed	√	
			Replace top several inches of filter media if recommended by inspection	√	
			Remove accumulated sediment from forebay (if applicable)		√
			Replace / repair stone or riprap as needed (if applicable)		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

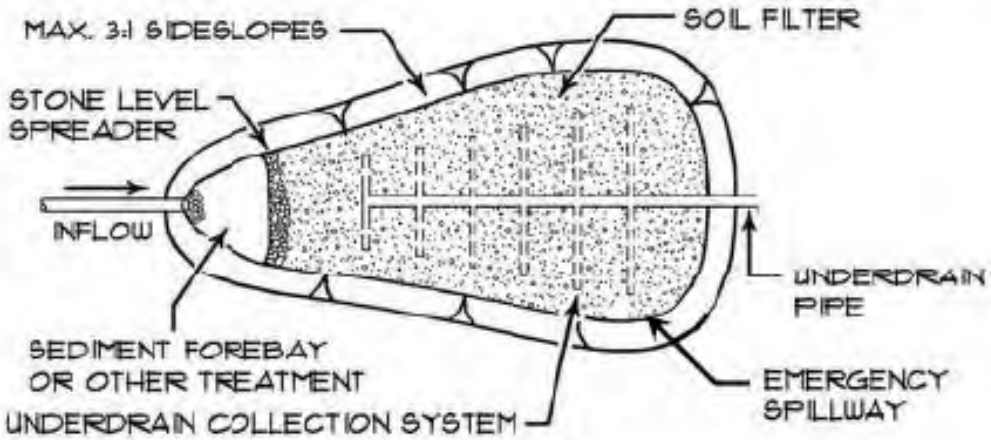
MATERIALS USED:

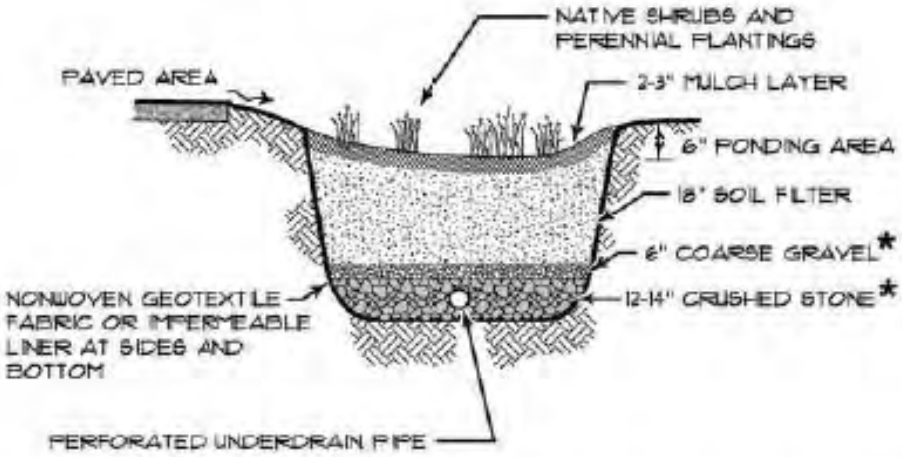
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

UNDERDRAINED SOIL FILTER MAINTENANCE FORM
MC-BMP-1: Mahoney Middle School

MC-BMP-1: Mahoney Middle School Grassed Underdrained Soil Filter





Diagrams from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

OTHER SYSTEMS

SUBSURFACE SAND FILTER MAINTENANCE FORM
AC-BMP-2: High School Parking Lot - North

OVERVIEW

Subsurface sand filters consist of a chamber system and surrounding aggregate over a sand layer designed to reduce stormwater discharge rate and temperature. The types of pollutants removed can include suspended solids, nutrients, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Clean "Isolator Row" using JetVac process (use nozzle with 45" spread)	X	√
			Apply multiple passess of JetVac until backflush water is clean	X	√
			Repair / revegetate any eroded areas around parking lot	X	√
			Remove excess accumulated sediment from catch basins as needed	X	√
			Properly dispose of any sediment removed	X	√

ADDITIONAL COMMENTS

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

SUBSURFACE SAND FILTER MAINTENANCE FORM
AC-BMP-2: High School Parking Lot - North

City of South Portland
Water Resource Protection

AC-BMP-2: High School Parking Lot North Subsurface Sand Filter

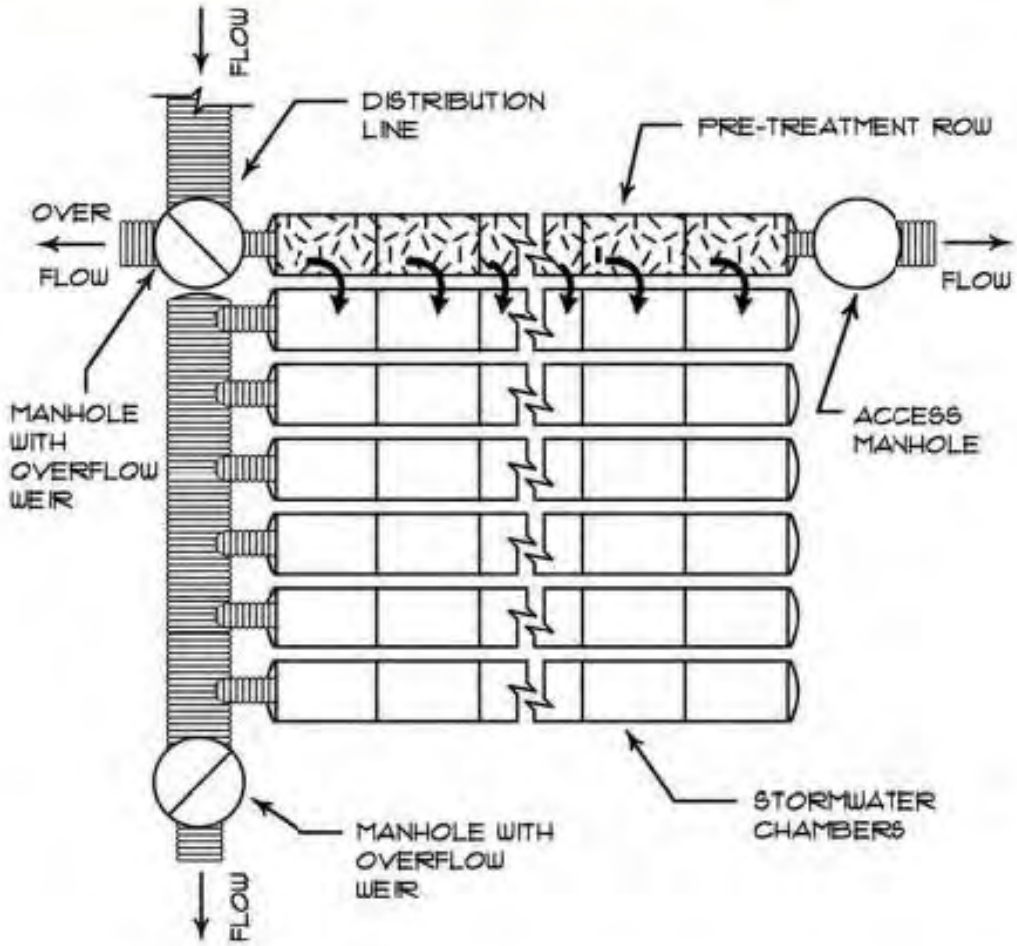


Diagram from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

DRIP LINE FILTER MAINTENANCE FORM
AC-BMP-6: High School Utility Shed

OVERVIEW

Drip line filters consist of a chamber system and surrounding aggregate over a sand layer designed to reduce stormwater discharge rate and temperature. The types of pollutants removed can include suspended solids, nutrients, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove weeds, decaying vegetation, litter and debris as needed	√	
			Remove woody or foreign / invasive plants	√	
			Replace / repair stone or riprap as needed		√
			Remove excess accumulated sediment from any subsurface structures		√
			Properly dispose of any sediment removed	√	√

ADDITIONAL COMMENTS

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

ADDITIONAL COMMENTS:

DRIP LINE FILTER MAINTENANCE FORM
AC-BMP-6: High School Utility Shed

AC-BMP-6: High School Utility Shed Drip Line Filter

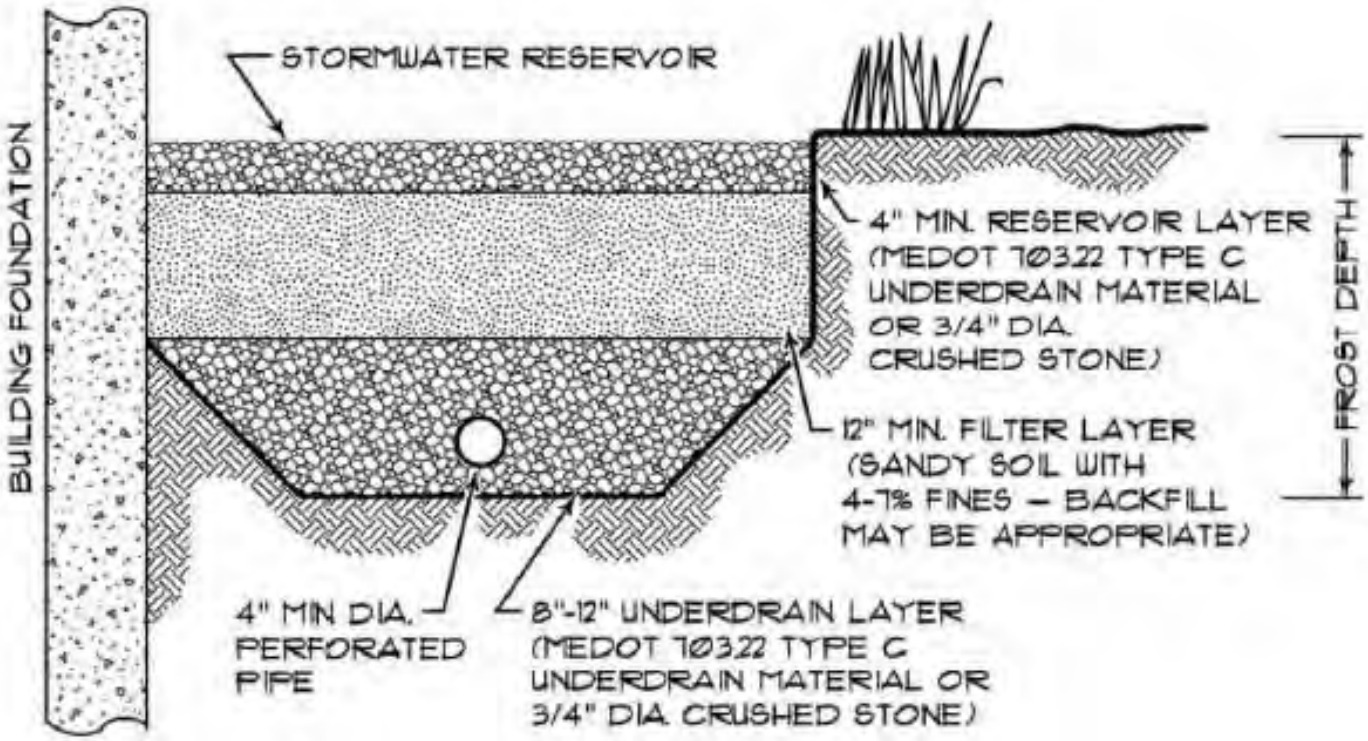


Diagram from DEP's Maine Stormwater Management Design Manual - Volume III (May 2016)

LEVEL SPREADER MAINTENANCE FORM
GAR-BMP-2: Transfer Station Level Spreader

City of South Portland
Water Resource Protection

OVERVIEW

A level spreader is a hardscaped structure used to spread concentrated stormwater flow broadly across a wide area to reduce the potential for erosion and sediment movement. It can also filter sediment and soluble pollutants. The discharge area is a vegetated buffer that allows for an even distribution of flow to prevent channelization.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Repair & revegetate any areas of erosion	√	
			Remove excessive woody vegetation and other weed growth	√	
			Remove accumulated sediment from stone area		√
			Replace / repair stone or riprap as needed		√
			Confirm even elevation (43.0') across full width of level spreader		√
			Properly dispose of any sediment/debris removed	√	√

ADDITIONAL COMMENTS

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

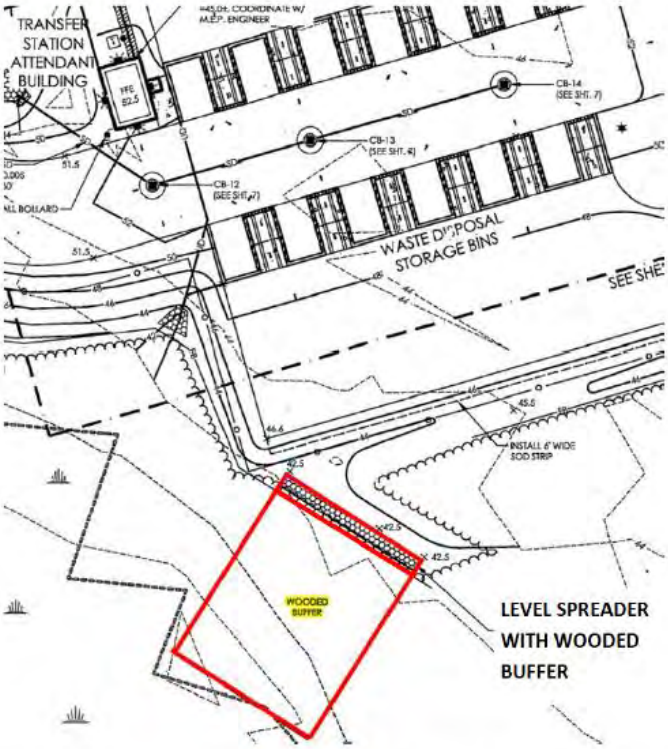
ADDITIONAL COMMENTS:

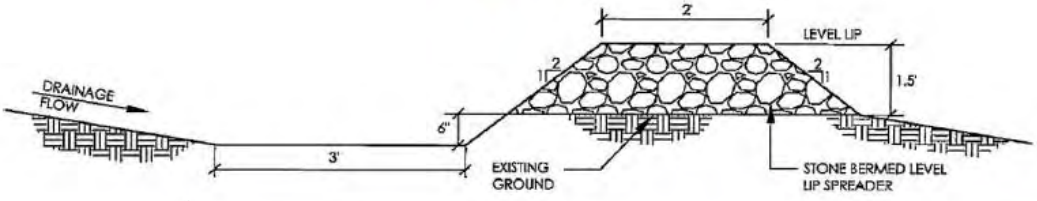
Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdllon@southportland.org).

LEVEL SPREADER MAINTENANCE FORM
GAR-BMP-2: Transfer Station Level Spreader

City of South Portland
Water Resource Protection

GAR-BMP-2: Transfer Station Level Spreader





Diagrams from Sebago Technics Municipal Services Facility Grading & Utility Plan (ver. 4/6/15)

TREE BOX FILTER MAINTENANCE FORM
TB-BMP-2: Boothby Avenue StormTree

City of South Portland
Water Resource Protection

OVERVIEW

Tree box filters consist of a concrete structure filled with a soil media, mulch and a street tree designed to retain and treat stormwater through filtration. The types of pollutants removed include suspended solids, nitrogen, phosphorus, metals, hydrocarbons and some dissolved contaminants. A perforated pipe collects filtered stormwater and discharges it to the City's stormwater system or directly to a receiving water.

ROUTINE MAINTENANCE

Annual inspections are completed to ensure that system is properly functioning. Maintenance tasks identified by the most recent inspection report are highlighted below. Please check boxes for each maintenance task completed.

DATE MAINTENANCE COMPLETED:_____ **MAINTENANCE COMPLETED BY:**_____

COMPLETED			MAINTENANCE TASKS	Completed By	
Yes	No	N/A		Parks	WRP
			Remove debris & litter from top of grates and/or sump inlets	√	
			Inspect tree trunk at grate entry and expand grate opening as needed	√	
			Open tree well grate and remove debris & sediment as needed	√	
			Replace soil filter media if needed to maintain adequate bed depth	√	
			Open sump grate and remove sediment & debris; also check weep holes		√
			Repair / revegetate any eroded areas around structure		√
			Remove excess accumulated sediment from deep sump catch basins		√
			Properly dispose of any sediment removed	√	√

START TIME: **STOP TIME:** **ELAPSED TIME:**

MATERIALS USED:

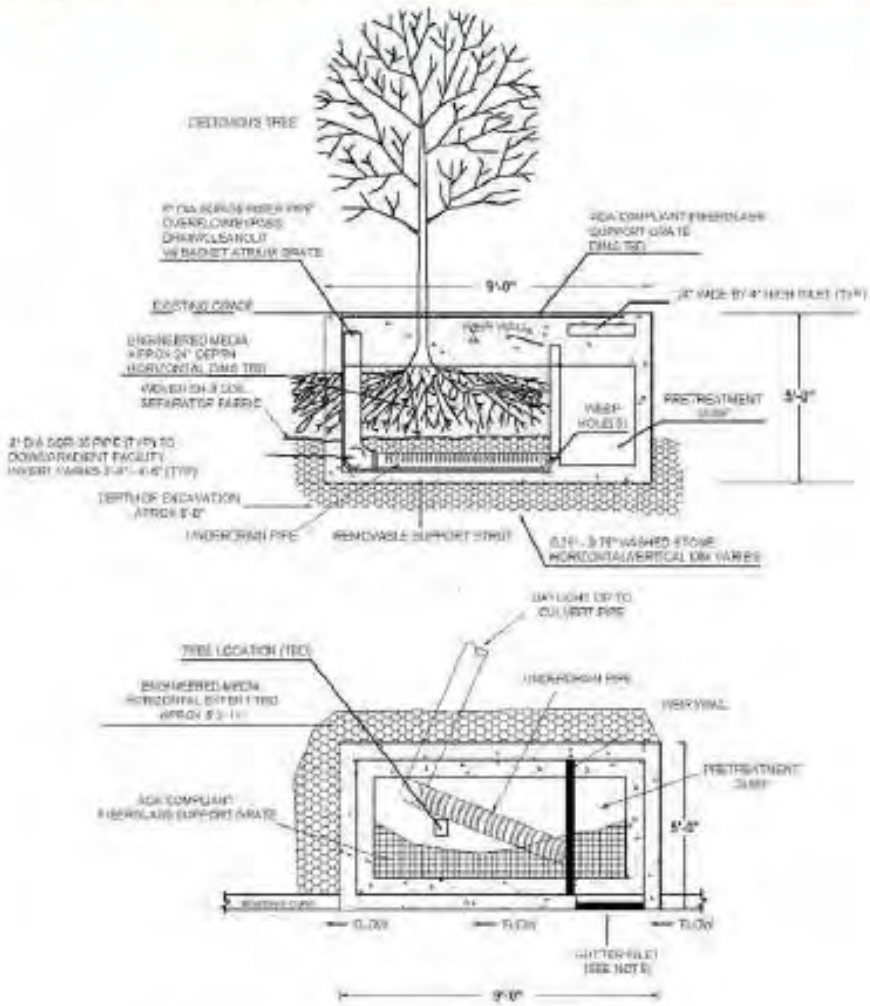
ADDITIONAL COMMENTS:

Please contact Stormwater Program Coordinator Fred Dillon with any questions (207-321-9437 / fdillon@southportland.org).

TREE BOX FILTER MAINTENANCE FORM
TB-BMP-2: Boothby Avenue StormTree

City of South Portland
Water Resource Protection

TB-BMP-2: Boothby Avenue StormTree



Diagrams from StormTree Design for Boothby Ave