



**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES
POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2**

Applicant: 222 Church Road LLC

Project Site Name: 222 Church Road

Surface Water Name(s): On-Site Wetlands Trib to Tookany Creek

Surface Water Use(s): WWF, MF

PCSM PLAN INFORMATION

1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.

Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)

Undetained Areas: 0.44 acre(s)

The Project Qualifies as a Site Restoration Project (25 Pa. Code §102.8(n))

2. Describe the sequence of PCSM BMP implementation in relation to earth disturbance activities and a schedule of inspections for the critical stages of PCSM BMP installation.

Refer to Sheet 20 'Record Plan (2 of 6) - PCSM Notes' for the overall site's Sequence of Construction and list of critical stages of PCSM BMP installation.

Refer to Sheet 20 'Record Plan (2 of 6) - PCSM Notes' and Sheet 24 'Record Plan (6 of 6) - PCSM Details' for the inspection and maintenance procedures for the proposed PCSM BMPs.

3. <input type="checkbox"/> Plan drawings have been developed for the project and will be available on-site.
4. <input checked="" type="checkbox"/> Plan drawings have been developed for the project and are attached to the NOI/application.
5. <input checked="" type="checkbox"/> Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts. There are no known naturally occurring formations or soil conditions that have the potential to cause pollution during earth disturbance activities.
7. Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts. There is a potential for thermal impacts to surface waters in instances where surface runoff is directly conveyed to a receiving stream without adequate attenuation or cooling. To avoid thermal impacts, a portion of the existing drainage area to POD#2 will be directed towards POD#1 in the post-development condition where there is greater potential to manage runoff prior to discharging from the site. The following measures are proposed in POD#1 in the post-construction conditions: a Bioretention Basin, shading from proposed landscaping, and conveyance of stormwater via underground pipes. These measures will help to control runoff volume and peak rate thereby providing additional cooling time or provide shading of runoff and thereby minimizing thermal impactst to the receiving stream.
8. <input checked="" type="checkbox"/> The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9. <input checked="" type="checkbox"/> A pre-development site characterization has been performed.

STORMWATER ANALYSIS – RUNOFF VOLUME

Surface Water Name: On-Site Wetlands Trib to Tookany Creek

Discharge Point(s): 002

1. The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.
2. The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.
3. An alternative design standard is being used.
4. A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.
5. 2-Year/24-Hour Storm Event: **3.30** inches Source of precipitation data: **NOAA Atlas 14, Volume 2, Version 3**
6. Stormwater Runoff Volume, Pre-Construction Conditions: **4,269** CF Calculations attached
7. Stormwater Runoff Volume, Post-Construction Conditions: **2,360** CF Calculations attached
8. Net Change (Post-Construction – Pre-Construction Volumes): **-1,910** CF
9. Identify all selected structural PCSM BMPs and provide the information requested. Calculations attached

DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				
							<input type="checkbox"/>				

Total Infiltration & ET Credits (CF): 0

Non-Structural BMP Volume Credits (CF) (Attach Calculations): 0

Managed Release Credits (CF) (Attach MRC Design Summary): 0

Volume Required to Reduce/Manage (CF): -1,910

Total Credits (CF): 0

INFILTRATION INFORMATION	
BMP ID:	<input type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	
2. Method(s) used for infiltration testing:	
3. Test Pit Identifiers (from PCSM Plan Drawings):	
4. Avg Infiltration Rate: in/hr	5. FOS: : 1
6. Infiltration rate used for design: in/hr	
7. Separation distance between the BMP bottom and bedrock: feet	
8. Separation distance between the BMP bottom and seasonal high-water table: feet	
9. Comments:	
BMP ID:	<input type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	
2. Method(s) used for infiltration testing:	
3. Test Pit Identifiers (from PCSM Plan Drawings):	
4. Avg Infiltration Rate: in/hr	5. FOS: : 1
6. Infiltration Rate Used for Design: in/hr	
7. Separation distance between the BMP bottom and bedrock: feet	
8. Separation distance between the BMP bottom and seasonal high-water table: feet	
9. Comments:	
BMP ID:	<input type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	
2. Method(s) used for infiltration testing:	
3. Test Pit Identifiers (from PCSM Plan Drawings):	
4. Avg Infiltration Rate: in/hr	5. FOS: : 1
6. Infiltration Rate Used for Design: in/hr	
7. Separation distance between the BMP bottom and bedrock: feet	
8. Separation distance between the BMP bottom and seasonal high-water table: feet	
9. Comments:	

STORMWATER ANALYSIS – PEAK RATE

Surface Water Name: On-Site Wetlands Trib to Tookany Creek **Discharge Point(s):** 002

1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.
2. The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.
3. An alternative design standard is being used.
4. A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.
5. Alternative rate calculations are attached.

6. Identify precipitation amounts. Source of precipitation data: NOAA Atlas 14, Volume 2, Version 3

2-Year/24-Hour Storm:	3.30	10-Year/24-Hour Storm	4.91
50-Year/24-Hour Storm:	6.90	100-Year/24-Hour Storm	7.90

7. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.

Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (cfs)	Difference (cfs)
2-Year/24-Hour	5.06	3.14	-1.92
10-Year/24-Hour	6.53	4.05	-2.48
50-Year/24-Hour	7.73	4.80	-2.93
100-Year/24-Hour	8.19	5.08	-3.11

8. Identify all BMPs used to mitigate peak rate differences and provide the requested information.

BMP ID	Inflow to BMP (cfs)				Outflow from BMP (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr

9. Report peak rates for pre-construction and post-construction with BMPs and identify the differences.

Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with BMPs) (cfs)	Difference (cfs)
2-Year/24-Hour	5.06	3.14	-1.92
10-Year/24-Hour	6.53	4.05	-2.48
50-Year/24-Hour	7.73	4.80	-2.93
100-Year/24-Hour	8.19	5.08	-3.11

STORMWATER ANALYSIS – WATER QUALITY

A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.

LONG-TERM O&M

Describe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.

BMP ID	O&M Requirements

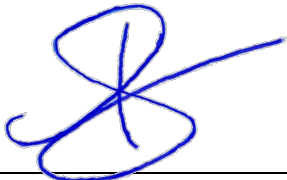
PCSM PLAN DEVELOPER

I am trained and experienced in PCSM methods.

I am a licensed professional.

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Exp. Date: 9/30/2023



PCSM Plan Developer Signature

9/12/2023

Date