



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

Applicant: CRG Services Management, LLC
Surface Water Name(s): 003 - UNT to Jordan Creek
(via onsite sheet flow)

Project Site Name: 2951 Betz Court Site
Surface Water Use(s): HQ-CWF, 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)
003	1	SWM/BMP Infiltration Facility #1	6.4.2	40.618665	-75.647500	8.34
003	2	SWM/BMP Dry Extended Detention Facility #2	6.6.3	40.619742	-75.644305	11.0
003	3	Forested Riparian Buffer	5.4.2	40.619779	-75.645088	11.0
003	4	Water Quality / Flexstorm Inlet Filter EX-1	6.6.4	40.370330	-75.384888	2.52
003	5	Water Quality / Flexstorm Inlet Filter EX-2	6.6.4	40.370400	-75.384834	0.10

Undetained Areas: _____ 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.

See PCSM Plan Set sheet SW 15.1 - "Critical Stages of BMP Implementation" headings.

3. Plan drawings have been developed for the project and will be available on-site.

4. Plan drawings have been developed for the project and are attached to the NOI/application.

5. 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.

See PCSM Plan Set sheet SW 15.1 - "Geologic Soil Formations & Potential Pollution" heading.

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.

See PCSM Plan Set sheet SW 15.1 - "Thermal Impacts Analysis" heading.

8. The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.

9. A pre-development site characterization has been performed.

STORMWATER ANALYSIS – RUNOFF VOLUME

Surface Water Name: 003 - UNT to Jordan Creek

Discharge Point(s): via onsite sheet flow

- 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: inches Source of precipitation data:~~

6. ~~Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached~~

7. ~~Stormwater Runoff Volume, Post-Construction Conditions: CF Calculations attached~~

8. ~~Net Change (Post-Construction – Pre-Construction Volumes): 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)
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Total Infiltration & ET Credits (CF):

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

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

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

INFILTRATION INFORMATION	
BMP ID: 1 (SWM/BMP Infiltration Facility #1)	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	4
2. Method(s) used for infiltration testing:	Double-Ring Infiltrometer
3. Test Pit Identifiers (from PCSM Plan Drawings):	IT-5, IT-6, IT-7, IT-8
4. Avg Infiltration Rate:	10.55 in/hr
5. FOS:	5.275 : 1
6. Infiltration rate used for design:	2.0 in/hr
7. Separation distance between the BMP bottom and bedrock:	>2 feet
8. Separation distance between the BMP bottom and seasonal high-water table:	>2 feet
9. Comments:	After infiltration testing, the facility was raised to the greatest extent practicable to provide separation distance between the facility bottom and the bedrock encountered during testing while still allowing for stormwater to flow into the facility. The facility will be over-excavated two (2) feet during conversion to ensure all bedrock is removed and replaced with an amended soil mixture.
BMP ID: 2 (SWM/BMP Dry Extended Detention Facility #2)	
	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	4
2. Method(s) used for infiltration testing:	Double-Ring Infiltrometer
3. Test Pit Identifiers (from PCSM Plan Drawings):	IT-1, IT-2, IT-3, IT-4
4. Avg Infiltration Rate:	0.0 in/hr
5. FOS:	N/A : 1
6. Infiltration Rate Used for Design:	N/A in/hr
7. Separation distance between the BMP bottom and bedrock:	>2 feet
8. Separation distance between the BMP bottom and seasonal high-water table:	>2 feet
9. Comments:	Due to a shallow limiting zone and very low infiltration testing results, infiltration is not proposed within this facility.
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:	001 - UNT to Jordan Creek (via onsite Wetland J) 002 - UNT to Jordan Creek (via onsite Wetland L) 003 - UNT to Jordan Creek (via onsite sheet flow)	Discharge Point(s):	001 - UNT to Jordan Creek (via onsite Wetland J) 002 - UNT to Jordan Creek (via onsite Wetland L) 003 - UNT to Jordan Creek (via onsite sheet flow)
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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:
2-Year/24-Hour Storm:	10-Year/24-Hour Storm
50-Year/24-Hour Storm:	100-Year/24-Hour Storm

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			
10-Year/24-Hour			
50-Year/24-Hour			
100-Year/24-Hour			

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			

10-Year/24-Hour			
50-Year/24-Hour			
100-Year/24-Hour			

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
1	See PCSM Plan Set sheet SW 14.1 - "Ownership and Maintenance of Stormwater / BMP Facilities" heading
2	See PCSM Plan Set sheet SW 14.1 - "Ownership and Maintenance of Stormwater / BMP Facilities" heading
3	See PCSM Plan Set sheet SW 14.1 - "Ownership and Maintenance of Stormwater / BMP Facilities" heading

PCSM PLAN DEVELOPER

I am trained and experienced in PCSM methods. I am a licensed professional.

Name:	<u>Joshua D. Hoffman, P.E.</u>	Title:	<u>Senior Engineer</u>
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City, State, ZIP:	<u>Harrisburg, PA 17110</u>	License No.:	<u>PE083268</u>
License Type:	<u>Professional Engineer</u>	Exp. Date	<u>September 30, 2023</u>



PCSM Plan Developer Signature

06/29/2023

Date