


 COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF CLEAN WATER

**Discharges of Stormwater Associated with Construction Activities
 Post-Construction Stormwater Management (PCSM) Module 2**
Applicant: **Mercer Node Property, LLC**Project Site Name: **Mercer Node Development**
Pre-Development Site Characterization

1. Was a pre-development site characterization completed for this project?
- ☐
- Yes
- ☒
- No

If Yes, describe the activities undertaken.

2. No. Test Pits completed: No. Boreholes completed:

3. Number of Infiltration Tests completed: Method(s):

4. Project Site Area: 17.43 acres Area investigated for infiltration capabilities: acres

5. DEP's Pre-Development Site Characterization Spreadsheet has been completed and is attached.
- ☐
- Yes
- ☒
- No

6. The infiltration potential of the site is:
- ☐
- Limited
- ☐
- Marginal
- ☐
- Feasible
- ☒
- Not Recommended

7. If the infiltration potential of the site is limited or is otherwise not advised, explain the limitations.

It has been identified that concentrations of Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Petroleum Contaminated Soil (PCSs), dioxins, metals, sulfate, and nitrate are in the groundwater at levels exceeding PADEP groundwater media specific concentrations (MSCs) and/or water quality standards (SWQS). It has also been identified that the presence of nonaqueous phase liquids (NAPL) and a low pH plume (collectively, the groundwater plumes). The groundwater plumes are located within the limits of the City of Sharon groundwater ordinance, which restricts potable, non-potable, and industrial use of groundwater. Due to these contaminations, infiltration is prohibited on the site.

8. Is the project site located in an area with known karst features?
- ☐
- Yes
- ☒
- No

 If Yes, was a subsurface geotechnical investigation conducted and is a report attached? ☐ Yes ☒ No

9. Are there natural stormwater features on-site that will be protected?
- ☒
- Yes
- ☐
- No

If Yes, describe the features and any increase or decrease in stormwater runoff volume to the features.

There are existing wetlands to the north of the site that are to remain. There are no proposed increases or decreases to the feature.

[illegible]

[illegible]

					☐			
2.	Area not treated by an SCM, Earth Disturbance Area (acres):			1.66	Area not treated by an SCM, Project Site Area (acres):			3.61
3.	☐ One or more SCMs will be located off-site. SCM IDs:							

PCSM SCM Inventory

4. For each infiltration-based SCM identified in Question #1, provide the information requested or attach separate sheets with this information.

SCM ID:

☐ **Separate sheets attached**[illegible]

PCSM SCM Inventory

5. List the critical stages for each SCM and identify the licensed professional and/or company that will sign SCM Construction Certification forms for the SCM.

SCM ID	Critical Stages	LP Name	Company	LP Employed by Company	Contract
2A	12.1. STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891 (STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES). THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS ARE FOLLOWING ASTM C891 IN ITS ENTIRETY AND IMPLEMENTING APPROPRIATE MEASURES. THE INSTALLING CONTRACTOR OWNS AND IS RESPONSIBLE FOR THE STORMTRAP SYSTEM UPON REMOVAL OF THE MODULES FROM THE DELIVERY TRUCK THROUGH FINAL CONSTRUCTION. FINAL CONSTRUCTION IS ACHIEVED WHEN ALL OF THE MODULES ARE SET, FULLY BACKFILLED, AND WHEN FINAL GRADES ARE REACHED. THE CONTRACTOR IS RESPONSIBLE FOR ANY COUNTERMEASURES NECESSARY TO RESIST UPLIFT/BUOYANCY BEFORE FINAL CONSTRUCTION IS ACHIEVED. 12.2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES. 12.3. STORMTRAP MODULES SHALL BE PLACED ON A LEVEL CONCRETE FOUNDATION WITH A 1'-0" OVERHANG ON ALL SIDES THAT SHALL BE POURED IN PLACE BY INSTALLING CONTRACTOR. THE GEOTECHNICAL ENGINEER OF RECORD TO ENSURE THAT THE SOIL BEARING PRESSURE MEETS OR EXCEEDS THE STRUCTURAL DESIGN LOADING CRITERIA. 12.4. THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADJACEMENT MODULES DOES NOT EXCEED 3/4". IF THE SPACE EXCEEDS 3/4", THE MODULES SHALL BE RESET WITH APPROPRIATE ADJUSTMENT MADE TO LINE AND GRADE TO BRING THE SPACE TO SPECIFICATION. 12.5. THE PERIMETER HORIZONTAL JOINT BETWEEN THE STORMTRAP MODULES AND TEH	Rachel McCune	Civil & Environmental Consultants INC.	☒	☐

	CONCRETE FOUNDATION SHALL BE SEALED TO THE FOUNDATION WITH PRE-FORMED MASTIC JOINT SEALER ACCORDING TO ASTM C891, 8.8, AND 8.12. THE MASTIC JOINT TAPE DOES NOT PROVIDE A WATERTIGHT SEAL. 12.6. ALL EXTERIOR ROOF AND EXTERIAL VERTICAL WALL JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH 8-IN WIDE PRE-FORMED, COLD APPLIED, SELF ADHERING ELASTOMERIC RESIN, BONDED TO A WOVEN, SEALANT, SEALANT AS APPROVED BY STORMTRAP. THE JOINT WRAP DOES NOT PROVIDE A WATERTIGHT SEAL. THE SOIL PURPOSE OF THE JOINT WRAP IS PROVIDE SILT AND SOIL TIGHT SYSTEM. . 12.7. IF THE STORMTRAP MODULE IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND DETERMINE WHETHER OR NOT THE MODULES WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT; CONTACT STORMTRAP IMMEDIATELY. ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY. 12.8. STORMTRAP MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP AND THE ENGINEER OF RECORD.				
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[illegible]

Stormwater Analysis – Runoff Volume

Surface Water Name: Shenango River **POA(s):** 001

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: 2.40 inches Source of precipitation data: NOAA

6. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Pre-Construction: See Attached CF

7. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Post-Construction: See Attached CF

8. Net Change (Post-Construction – Pre-Construction Volumes): See Attached CF

9. Identify all selected structural PCSM SCMs and provide the information requested. ☐ Calculations attached

SCM ID	Series	MRC	Vol. Routed to SCM (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
		☐					☐				
		☐					☐				
		☐					☐				
		☐					☐				
		☐					☐				
		☐					☐				
		☐					☐				
		☐					☐				
		☐					☐				

Total Infiltration & ET Credits (CF):

Other Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Spreadsheet):

Volume Required to Manage (CF):

Total Credits (CF):

Stormwater Analysis – Peak Rate

Surface Water Name: Shenango River

POA(s): 001

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. ☒ DEP's PCSM Spreadsheet – Rate Worksheet was used for peak rate calculations and is attached.
5. ☐ Alternative rate calculations are attached.

6. Identify precipitation amounts. Source of precipitation data: NOAA

2-Year/24-Hour Storm:	2.40	10-Year/24-Hour Storm	3.38
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50-Year/24-Hour Storm:	4.50	100-Year/24-Hour Storm	5.02
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7. Identify all SCMs used to mitigate peak rate differences and provide the requested information.

[illegible]

8. Report peak rates for pre-construction and post-construction with SCMs and identify the differences.

Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (cfs)	Post-Construction Peak Rate with SCMs (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.					
Other Information					
1. ☒ A long-term operation and maintenance (O&M) plan has been prepared for each SCM.					
2. ☒ A long-term O&M plan will be recorded with a legal instrument for each property containing an SCM.					
3. ☒ PCSM Plan Drawings have been developed for the project and are attached to the NOI/application.					
4. ☒ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.					
5. ☒ Recycling and proper disposal of materials associated with PCSM SCMs are addressed as part of long-term operation and maintenance of the PCSM SCMs.					
6. ☐ There are pre-construction stormwater discharges to wetlands from the project site.					
Pre-Construction		Post-Construction			
Wetland ID	Drainage Area (ac)	Volume (CF)	Drainage Area (ac)	Volume (CF)	Ponding Depth Increase or Decrease (±%)
7. Describe the sequence of PCSM SCM implementation in relation to earth disturbance activities. MRC underground detention MRC cells 2A and 2B are to be installed per the manufacturers specifications and per the design plans during Phase I of the project. In Phase 2/3 the outlet control structure weir plate is to be modified for the revised configuration as indicated in the design plans. Underground Detention Systems 3A and 3B are to be installed per the manufacturers specifications and per the design plans during Phase 2/3 of the project.					
8. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM SCMs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts. N/A					
9. Thermal Impacts: check the appropriate box(es) if any of the following (a. – c.) are true: ☒ Not Applicable					
☒ a. One or more peak rate control SCMs are proposed that will receive stormwater from a drainage area containing more than 25% impervious surface.					
i. Drainage Area of SCM: 15.03 acres					
ii. Drainage Area of Surface Water at POA of SCM: 387,840 acres					
iii. Ratio of SCM Drainage Area : Surface Water Drainage Area: <0.01 %					
<i>If the value reported for a.iii. exceeds 10%, attach a quantitative thermal impact analysis.</i>					
☐ b. A Wet Basin or Engineered Stormwater Treatment Wetland is proposed that does not include shading and/or a reversed slope outlet pipe (if true, attach a quantitative thermal impact analysis).					

☒	c.	There will be post-construction undetained areas, within the limit of disturbance, that contain impervious surface.	
	i.	Undetained Impervious Area:	1.66 acres
	ii.	Drainage Area of Surface Water Receiving Stormwater from Undetained Impervious:	387,840 acres
	iii.	Ratio of Undetained Impervious: Surface Water Drainage Area:	<0.01 %
		<i>If the value reported for c.iii. exceeds 10%, attach a quantitative thermal impact analysis.</i>	
☒	d.	A quantitative thermal impact analysis is not required.	

[illegible]

- 1 Enter the impervious area as presented on PCSM Plan Drawings.
- 2 Report the maximum allowable impervious on the lot according to the stormwater analysis and SCM design.
- 3 List the maximum allowable impervious on the lot to meet requirements of a local ordinance, if applicable.
- 4 Check the box if either 1) Maximum Allowable Impervious, As Designed is at least 110% of Planned Impervious or 2) Planned Impervious is equal to Maximum Allowable Impervious, Per Ordinance. If the box is checked and the maximum impervious area for the lot is recorded, the permittee will not be responsible for identifying new impervious added to a lot on record drawings after a lot is sold during the term of permit coverage.

PCSM Plan Preparer

☒ I am trained and experienced in PCSM methods.

☒ I am a licensed professional.

No. years of experience preparing PCSM Plans: 31

Name: Michael E. Archer
Company: Civil & Environmental Consultants, Inc.
Address: 700 Cherrington Parkway
City, State, ZIP: Moon Twp, PA 15108
License Type: Professional Engineer

Title: Principal
Phone No.: 724-991-2325
Email:
License No.: PE056060
Exp. Date: September 2027



PCSM Plan Preparer Signature

April 7, 2026

Date

Identify those who assisted the individual identified above in preparing the PCSM Plan:

Name	Company	Field	LP?	License Type
Rachel McCune	Civil & Environmental Consultants, Inc		☒	Professional Engineer
Bethanie Hepner	Civil & Environmental Consultants, Inc		☐	
			☐	
			☐	
			☐	