Pennsylvania Department of Environmental Protection

CHAPTER 102

Revised 11/17/25

FACT SHEET

Reviewed By: Karl M.Gross, P.E. Office: DEP Northwest Regional Office

Date of Original PCSM Plan Drawings: Date of Final Approved PCSM Plan Drawings: 5/18/2026*

PCSM TECHNICAL REVIEW CHECKLIST

REVIEW ITEM	COMPLIES	DEFICIENT	N/A	Citation
1 Pre-Development Site Characterization (PDSC):				
a. A minimum of 4 test pits and/or soil borings were completed across the project site (or 2 were completed and meet exception criteria).	✓			
b. The pre-development site characterization considered the entire project site, not just area within the LOD.	✓			
c. The locations of test pits or soil borings and infiltration tests are identified on PCSM Plan Drawings.	✓			
d. Exclusions identified in the PDSC Spreadsheet were reflected on PCSM Plan Drawing(s).	✓			
e. The exclusions selected by the applicant are appropriate or reasonable.	✓			
f. The project site is within 0.5 mile of identified sinkholes and closed depressions on DCNR's published maps of sinkholes and karst features or within 0.5 mile of a "Karst Feature" on DEP's eMapPA.		✓		
g. The geotechnical report evaluated the potential for sinkholes and infiltration capabilities on-site.			✓	§ 102.8(g)(1)
h. Test pits or soil borings and infiltration testing were completed if the overburden on-site is at least 50 feet or the overburden is at least 33 feet and sinkhole risk is low.			✓	
i. The PDSC Spreadsheet indicates the infiltration test location frequency was at least 1 per 40,000 SF or the frequency was between 0.5 and 1 and the coefficient of variability (CV) was sufficiently low (<= 0.5) to allow a professional to determine whether additional tests were warranted.			✓	
j. The PDSC Spreadsheet indicates that additional infiltration tests are recommended.			✓	
k. A professional attached a justification to Module 2 for not completing additional tests and the justification is technically sound.			✓	
2 Stormwater Analysis:				
a. All pre- and post-construction stormwater runoff was accounted for in the stormwater analysis (i.e., the selected POAs account for all runoff from the LOD).	✓			§ 102.8(g)(2)
b. Post-construction drainage areas to SCMs and undetained areas are clearly shown on PCSM Plan Drawings.	✓			§ 102.8(f)(15)
c. Curve numbers and land covers are based on TR-55 or technically sound justification for other curve numbers has been provided.	✓			§ 102.8(g)(4)
d. The precipitation depth for the 2-year/24-hour storm event is based on NOAA Atlas 14 or other reputable sources.	✓			
e. All pervious non-forested pre-construction land cover is identified as meadow.	✓			§ 102.8(g)(2)(i)
f. If all pervious non-forested pre-construction land cover is not identified as meadow, one of the exceptions at § 102.8(g)(2)(i) applies.			✓	
g. At least 20% of existing impervious to be disturbed is treated as meadow in the pre-construction condition.	✓			§ 102.8(g)(2)(ii)
h. If at least 20% of existing impervious to be disturbed is not treated as meadow in the pre-construction condition, one of the exceptions at §§ 102.8(g)(2)(ii) or (iii) applies.			✓	
i. Calculations were provided to demonstrate the net change in volume up to the 2-year/24-hour storm event and the calculations are technically sound, or the PCSM Spreadsheet, Volume Worksheet was submitted.	✓			§ 102.8(g)(2)
j. A volume reduction standard contained in an approved and current Act 167 Plan was used, and the reviewer has confirmed that 1) the Act 167 Plan was approved within the past five years, and 2) the standard from the Plan was applied appropriately.			✓	§ 102.8(g)(2)

k.	An alternative design standard has been proposed for managing the net change in volume and an adequate demonstration has been made that the alternative standard is at least as stringent as management of the net change up to the 2-year/24-hour storm.			✓	§ 102.8(g)(2)(iv)
l.	The PCSM Spreadsheet, Quality Worksheet was submitted, demonstrating management of the net change in water quality (pollutant loading) up to the 2-year/24-hour storm event.	✓			§ 102.8(g)(2)
m.	Calculations were provided to demonstrate the net change in peak rates for the 2, 10, 50, and 100-year/24-hour storm events and the calculations are technically sound, or the PCSM Spreadsheet, Rate Worksheet was submitted.	✓			§ 102.8(g)(3)
n.	Rate requirements contained in an approved and current Act 167 Plan was used, and the reviewer has confirmed that 1) the Act 167 Plan was approved within the past five years, and 2) the standard from the Plan was applied appropriately.			✓	§ 102.8(g)(3)
o.	An alternative design standard has been proposed for managing the net change in peak rates and an adequate demonstration has been made that the alternative standard is at least as stringent as management of the net change for the 2, 10, 50, and 100-year/24-hour storm events.			✓	§ 102.8(g)(3)(iii)
p.	The Rational Method (including Modified Rational Method and Universal Rational Method) was used to determine pre- or post-construction volumes or peak rates.		✓		§ 102.8(g)(4)
q.	The applicant demonstrated that use of the Rational Method results in a peak rate control SCM footprint and storage capacity that is greater than or equal to SCS/NRCS hydrograph methods.			✓	
3	**PCSM SCMs:**				§ 102.11(a)(2)
a.	All proposed PCSM SCMs have been designed in accordance with the Stormwater BMP Manual.	✓			
b.	Minor deviations from the Stormwater BMP Manual were proposed that were justified by the designer and in the reviewer's judgment can be approved without considering the SCM an Alternative SCM.		✓		§ 102.11(b)
c.	One or more SCMs were proposed that are not identified in the Stormwater BMP Manual but are on DEP's list of Approved Alternative PCSM SCMs.		✓		
d.	One or more SCMs were proposed that are not identified in either the Stormwater BMP Manual or DEP's list of Approved Alternative PCSM SCMs.		✓		
e.	There will be discharges to waters with existing or designated uses of HQ or EV or waters impaired for siltation; turbidity; TSS; algae; eutrophication; nutrients; flow regime modification; and/or habitat alterations (including the Chesapeake Bay).	✓			
f.	The SCMs will individually or collectively eliminate or manage the net change in volume and pollutant loads up to the 2-year/24-hour storm for the entire area of disturbance.	✓			§ 102.8(h)
g.	SCM design calculations appear reasonable and support the volume, WQ, and rate control credit claimed in the PCSM Spreadsheet or alternative analysis.	✓			§ 102.11(a)(2)
h.	SCM design calculations consider all flows routed to the SCM from the LOD, project site, and off-site, as applicable.	✓			
i.	Non-structural volume management credits were claimed in the PCSM Spreadsheet, Volume Worksheet.		✓		
j.	Separate calculations for non-structural volume management credits are provided and are based on the Stormwater BMP Manual or otherwise have a sound technical basis.			✓	
k.	Non-structural water quality (WQ) management credits were claimed in the PCSM Spreadsheet, Quality Worksheet.		✓		
l.	Separate calculations for non-structural WQ management credits are provided and are based on the Stormwater BMP Manual or otherwise have a sound technical basis.			✓	
m.	A manufactured treatment device (MTD) or other water quality treatment system is proposed.			✓	
n.	WQ management credits for an MTD were calculated on the basis of median outflow concentrations (MOCs) for pollutants that are expected for the project's design flow rate.			✓	

o.	The inspection and O&M frequencies and requirements for each SCM as provided in PCSM Plan Drawings or a separate narrative are reasonable.	✓			
p.	One or more infiltration-based SCMs are proposed.		✓		
q.	The PCSM Plan Drawings specify the need to protect the infiltrating surface from compaction during construction and permanently stabilize the SCM's drainage area prior to constructing the SCM.			✓	
r.	The PCSM Plan Drawings specify the need to conduct confirmation testing for infiltration capabilities prior to completing infiltration-based SCMs when the SCM is converted from an E&S BMP or when the infiltrating surface has been compacted or is not protected.			✓	
s.	PCSM Plan Drawings or a separate planting plan shows deep-rooted vegetation (generally plug plantings, shrubs, etc.) in lieu of or addition to seed mixes where the PCSM Spreadsheet provides evapotranspiration (ET) credit for a vegetated SCM.			✓	
t.	Critical stages of PCSM SCM construction or installation are identified on plan drawings and are appropriate for the type(s) of SCM(s) proposed.	✓			§ 102.8(f)(7)
4	**Managed Release Concept (MRC) SCMs:**			✓	
a.	The PDSC Spreadsheet indicates options other than infiltration should be considered.			✓	
b.	There are constraints on the project site other than karst and limited infiltration rates that may justify the use of MRC SCMs.			✓	
c.	Alternatives to MRC (e.g., riparian forest buffers, capture and use SCMs) were evaluated and deemed to be infeasible.			✓	
d.	PCSM Plan Drawings substantiate that the maximum drainage area (1 acre), soil media depth (2 feet with 1-foot IWS), and other standards are met for SCMs reported on the MRC Simplified Design Spreadsheet.			✓	
e.	For SCMs reported on the MRC Simplified Design Spreadsheet, a diversion or bypass is shown on PCSM Plan Drawings to route storms exceeding the 2-year/24-hour storm around the MRC SCM to a rate control SCM.			✓	§ 102.11(a)(2)
f.	PCSM Plan Drawings substantiate that the design standards are met for SCMs reported on the MRC Spreadsheet.			✓	
g.	Calculations are provided to demonstrate that the 2-year/24-hour post-construction peak rate is managed back to the 1-year/24-hour pre-construction peak rate within the MRC SCM or a downstream rate control SCM for the MRC drainage area.			✓	
h.	Calculations are provided to demonstrate that the controlled release through the underdrain orifice will meet the 0.02 cfs/equivalent impervious acre standard.			✓	
i.	MRC credits from the appropriate MRC spreadsheets have been accurately entered into the PCSM Spreadsheet, Volume Worksheet.			✓	
5	**Riparian Buffers:**			✓	
a.	The applicant has proposed a riparian buffer or riparian forest buffer as a PCSM SCM.			✓	§ 102.14
b.	A riparian forest buffer management plan is attached and is generally consistent with § 102.14.			✓	
c.	The applicant has completed an equivalency demonstration in lieu of establishing or protecting a riparian buffer or riparian forest buffer.			✓	
d.	The equivalency demonstration is consistent with DEP guidance and worksheets 12, 13, 14 and 15 have been completed accurately.			✓	
e.	An offset riparian forest buffer is proposed due to proposed disturbance within 100 feet of a surface water designated for HQ or EV.			✓	
f.	The offset riparian forest buffer is proposed in the same drainage list as the project site and is shown on PCSM Plan Drawings.			✓	35 P.S. § 691.402(c)
g.	The offset riparian forest buffer will have an area at least as large as the riparian forest buffer on the project site to be disturbed and will be a minimum of 50 feet wide.			✓	
h.	The applicant has provided written authorization from the off-site property owner to establish an offset riparian forest buffer.			✓	
i.	PCSM Plan Drawings show a level spreader along the width of the riparian forest buffer if concentrated or shallow concentrated flow is expected to form upstream of the buffer.			✓	

6	**EP Analysis:**			✓	
a.	Critical sections of flow paths have been identified correctly.			✓	
b.	Calculations were provided for SCM outflow discharge rates at the 10-year/24-hour storm and appear to be accurate.			✓	
c.	Maximum allowable velocity and/or sheer reported for critical sections are reasonable and are based on reputable sources.			✓	§ 102.4(c)
d.	Calculations for maximum velocity and/or sheer appear to be accurate based on proper Manning's "n" value and other input parameters.			✓	
e.	Where calculated maximum velocity or shear exceeds maximum allowable velocity or sheet, improvements to flow paths are proposed.			✓	
7	**Post-Construction Stormwater Discharges to Wetlands:**			✓	
a.	Modeling and calculations supporting the values reported in PCSM Module 2 for pre- and post-construction volumes and ponding depths appear reasonable.			✓	
b.	The wetlands receiving stormwater discharges are EV wetlands.			✓	
c.	The post-construction change in ponding depth for the 2-year/24-hour storm event (or greater) is less than 50% of the pre-construction ponding depth.			✓	§ 102.8(g)(6)
d.	Discharges to wetlands will be via sheet flow only.			✓	
e.	Due to grading or other reasons, the potential exists in the reviewer's judgment for long-term detrimental impacts to wetland hydrology that should be evaluated by a wetland scientist.			✓	
8	**Temperature Impacts:**				
a.	A peak rate control SCM is proposed that will receive stormwater from a drainage area containing more than 25% impervious surface that exceeds 10% of the receiving surface water's watershed area.	✓			
b.	A Wet Basin or Engineered Stormwater Treatment Wetland is proposed that does not include shading and/or a reversed slope outlet pipe.		✓		§ 102.8(f)(13)
c.	An impervious undetained area exceeds 10% of the receiving water's watershed area.		✓		
d.	A quantitative thermal impact analysis has been submitted and demonstrates there will not be a thermal impact to surface waters from the project.		✓		

Reviewer Comments:

Post-remediation sampling was conducted for the project and appears to demonstrate that site contamination does not exceed non-residential standard within the areas proposed for disturbance. Since the project involves laydown areas proposed for site restoration and remaining areas proposed the use of capture and reuse to manage volume without the use of infiltration SCMs, no infiltration testing was deemed necessary. Modification includes revision to previously approved capture, conveyance and storage basins to be utilized for capture and re-use. It appears that that the capture and re-use adequately manages the net increase in 2-year, 24-hour runoff volume for the affected discharge point/point of analysis locations. Rate and water quality requirements appear met. Adverse thermal impacts are not anticipated due to net decrease in impervious areas, capture and re-use, and vonveyance of discharges from the proposed basins through underground piping. Final plan indicate a "Issued for Permitting" date of 10/15/2025 and were received by DEP on 12/22/2025. Second modification (Phase 3) adds two new laydown areas (M and N) that are to be restored to approximate contour and vegetated in the post-construction condition. Revisions to area and cover conditions for areas contributory to SCM-02 and Laydown Areas C, E, and F result in minor changes to volume routed to SCM-02, however, changes do not adversely impact volume storage/capture and re-use. New SCM-04 created to manage runoff from AIS area (substation) outlets through pump station to water treatment plant and contributes to capter and reuse with emergency spillway for discharge of events exceeding 100-year to stream 08. Final plans indicate a "Issued for Permitting" date of 5/18/2026.